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CONTENTS AND SUBJECT INDEX

The Nature, Incidence and Treatment of Endamebiasis. Philip W. Brown, M.D., Rochester, Minn. 457

Anemia in Hypothyroidism: Report of Cases. George M. Mackenzie, M.D., New York 462

The Management of Persistent Occipito-posterior Postion by Use of the Kielland Forceps or Manual Rectification. C. S. Bacon, M.D., Chicago 465

Simultaneous Cholecystography and Tests of Hepatic and Renal Functions by a Single New Substance, Sodium Phenoltetra-Iodophthalein: Preliminary Report. Evarts A. Graham, M.D.; Warren H. Cole, M.D.; Glover H. Copher, M.D., and Sherwood Moore, M.D., St. Louis 467

Factors Influencing Appendicitis Mortality: Results in Eleven Thousand Four Hundred Cases. Frederick C. Warnshuis, M.D., Grand Rapids, Mich. 469

End-Results of Radium Treatment of Skin Cancer in Two Hundred and Sixty-Five Cases. Ernest M. Daland, M.D., Boston 471

Unusual Bile Duct Visualization by Roentgenograms of Barium Meal: Report of Case. Edwin Habbe, M.D., and Lester A. Smith, M.D., Indianapolis 476

Recurrent Dumb-Bell Stone in Vesical Bladder and Diverticulum: Report of Case. W. Calhoun Stirling, M.D., Washington, D. C. 478

Kala-Azar: A Case Occurring in New York. Charles Ivan Junkin, M.B. (Toronto), Lackawanna, N. Y. 479

SPECIAL ARTICLES

The Frequency of Botulism: A Report of Outbreaks from 1922 to 1926 482

Technic of Medication: Seventh Article. Bernard Fantus, M.D., Chicago 483

EDITORIALS

The Recent Increase in Pulmonary Cancer 486

"Sanocrysin" Again 487

Tolerance to Alcohol 488

CURRENT COMMENT

Physiologic Aspects of Glare 488

Chiropractic Not Harmless 489

Progress of State Society Journals .. 489

Physicians in Congress 489

(Subject Index on next page)

ASSOCIATION NEWS 490

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See Page 3

SUBJECT INDEX TO THIS ISSUE

The letters used to explain in which department the matter indexed appears are as follows: The Star (*) indicates an Original Article; "ab," abstract; "E," Editorial; "C," Correspondence; "T," Therapeutics; "MI," Medicolegal; "P," Propaganda for Reform; "ME," Medical Economics.

A. M. A., Dallas session, barbecue for doctors 490
Accident, charitable institution, liability of MI-509
Air, fresh, and health....495
Alastrim, smallpox and chickenpox....498
Alcohol, tolerance to....E-488
drinking alcohol U. S. P....505
Alcoholism, tests for....496
Amyloid formation ab-512
Anemia in hypothyroidism....*462
from radium therapy....498
pernicious, blood crisis in....ab-516
pernicious, from roentgen rays....ab-522
Anesthesia, hypoglycemia after....ab-512
spinal 499
Angina Pectoris, glucose intravenously....ab-521
sympathectomy in ab-517
Anthropology, chair of, in University of Sydney 496
Appendicitis mortality *469
Arsphenamin treatment ab-516
treatment of endamebiasis....*457
Art exhibit by physicians....499
Artery, coronary, occlusion....ab-514
coronary, disease of....ab-513
Association News....490
Bacillus, paratyphoid group....ab-513
Bacteriophage, sodium chloride action on..ab-518
inactivated, antigen property....ab-517
symbiosis of bacteria with....ab-517
Beriberi, experimental, vs. insulin....ab-517
Bile Duct, visualization by roentgenograms of barium meal....*476
Biology, experimental, society of....497
Bladder, calculi, recurrent....*478
Blood, bactericidal potency....ab-522
counts after glucose injections....ab-521
lactose determination ab-521
pressure after glucose injections....ab-521
sugar, effects of quinine on....ab-515
sugar, effect of thyroid feeding on....ab-511
sugar in Bengalese....ab-515
sugar, postanesthetic ab-512
transfusion research ab-520
Bone explants ab-520
Book Notices....508
Books Received....508, also Adv. page 26
Botulism outbreaks, 1922-1926....*482
Brain, glioma of....ab-514
tumors, roentgenotherapy ab-518
British Medical Association and tests for drunkenness 496
Bronchiectasis vs. sinusitis....ab-511
Burns, scarlatinal eruption after....ab-522
Calcium content of placenta....ab-519
Cancer, stain test for....ab-519
virus....ab-495
Cesarean Section, repeated....ab-520
Chickenpox, scarlatinal eruption after....ab-522
alastrim, smallpox, and....498
Chiropractic not harmless....C-489
Cholera and trachoma cases....498
Colitis and nervous disorder....ab-517
Congress, physicians in....E-489
Corn sugar as preservative....494
Cranium, injury, lumbar puncture in....ab-512
roentgenoscopy, gargoyle position for...ab-516
Deaths....501
Diabetes, glycosuria threshold in....ab-522
Diphtheria, experimental, heart disorders in ab-516
Disinfection and rat extermination....498
Dysentery in Haiti....ab-514
Edema in pregnancy....ab-520
Emetin treatment of endamebiasis....*457
Encephalitis, epidemic, after vaccination..ab-522
Endamebiasis *457
Endocervicitis, gonorrheal, mercurochrome in ab-512
Epilepsy in cerebral syphilis....ab-522
sympathectomy in ab-518
Epinephrine test in diagnosis....ab-521
Erythrocytes after splenectomy....ab-521
antigen character ab-522
Erythrocytosis in inoculated malaria....ab-514
Esophagus, stenosis, in elderly....ab-516
Evidence, expert, self-serving declarations as basis MI-509
Eye medication, technic of....*483
Fatigue, muscular, and insulin....ab-522
Fees, liability of divorced father....MI-509
statute of frauds, promise of landlord to pay MI-510
Foreign Letters....495
Formaldehyd fumigators 505
Gallbladder inflammation ab-518
roentgenography using phenoltetraiodophthalein *467
Gangrene, periaterial sympathectomy for..ab-518
Gastro-enteritis, leukocytes in....ab-521
Gelatin treatment of pain....ab-519
Glare, physiologic aspects of....E-488
Glioma of brain....ab-514
Glucose, intravenously ab-521
injections, blood counts and blood pressure after ab-521
injections, capillaries after....ab-521
spasm reducing action of....ab-521
Goiter and pulmonary tuberculosis....ab-521
Health and open air....495
American Health Congress....494
International Conference of Medical Officers 498
public health physicians of Berlin....500
Hearing, fundamentals of bone conduction ab-511
Heart efficiency ab-515
after sympathectomy ab-517
block, traumatic origin....MI-510
cardiorrhaphy ab-512
infarction ab-513
Heat production vs. vitamin B....ab-511
Héger, Paul, death of....499
Hormones, Bock's polarization test for....ab-520
Hospitals in S. Paulo....ab-519
charitable, liability of, reasons for exemption MI-509
Dosi Memorial hospitals....498
hospital ship on Congo....499
Hypothyroidism, anemia in....*462
Hysteresis in infants....ab-522
Influenza after vaccination....ab-522
Insulin, action on beriberi....ab-517
muscular fatigue and....ab-522
researches on 497
Intelligence, distribution of....496
Intestines, stasis ab-520
Journals of state societies, progress....E-489
Kidney, function tests, using phenoltetraiodophthalein *467
tuberculosis, in children....ab-517
Labor, rectal examination in....ab-519
persistent occipitoposterior position....*465
Lactose in tissues, blood and kidneys....ab-521
Lambliasis and cholecystitis....ab-518
Laryngostomy, postoperative care....ab-512
Leishmaniasis in New York....*479
Leprosy, treatment ab-515
Leukocytes in gastro-enteritis....ab-521
Leukocytosis, lymphocytes in....ab-519
Leukonychia 505
Licensure, fake diplomas sold in Japan....498
Liver, digestion hemoclasis test....ab-516
function tests, using phenoltetraiodophthalein *467
Lung cancer, recent increase in....E-486
Lymphocytes in leukocytosis....ab-519
Malaria, Risquez sign in....ab-519
tertian, spring relapses in....ab-514
therapeutic, erythrocytosis in....ab-514
Marasmus in infants....ab-522
Marriages....501
Measles, Caronia's tests....ab-521
tuberculosis activated by....ab-521
Medical Attendance, parent, duty when divorced MI-509
Medical Education, Registration....506
Medication, technic of....*483
Medicolegal....509
Meetings, Coming Meetings....510
Membrane potential ab-522
Mercurochrome in gonorrheal endocervicitis ab-512
Military Sanitary School reopens....497
Mission, medical, founded by physician....492
Mucous membranes, local applications to...*483
Myocardium, ischemic necrosis of....ab-516
Nails, white spots on....505
National Board of Medical Examiners....493
Nerve, vagotonia, and digestion hemoclasis test ab-516
Nervous System, disorder and colitis....ab-517
Neuralgia, trigeminal, alcohol injection in..ab-512
Neurosyphilis, status epilepticus in....ab-522
Nevus, pigmented, treatment....ab-512
News 490
Nose medication, technic....*485
Old Age, esophageal stenosis in....ab-516
Otomycosis, potassium iodide in....ab-511
Ovary function and hormone....ab-520
transplantation, value of....ab-518
Ozena, bacilli causing fetidity in....ab-517
Pain, gelatin treatment of ab-519
Pancreas, reaction to operation on neighboring organ ab-520
Paralysis, general, malaria treatment....ab-518
Parathyroid hormone....ab-520
extract in tetania parathyreopriva....ab-511
Phenoltetraiodophthalein for simultaneous cholecystography and hepatic and renal function tests *467
graft treatment of tetany....496
Physicians, art exhibit by 499
in Congress E-489
Placenta, calcium content....ab-519
Pneumonia in children....ab-519
Poliomyelo-encephalitis, convalescent's serum for ab-516
Pregnancy, edema in ab-520
glycosuria threshold in....ab-522
infection path in pyelitis in....ab-520
Privileged Communication, waiver, testimony of consultant MI-510
Propaganda for Reform....502
Protein therapy in children....ab-521
anaphylaxis inducing property....ab-517
Puberty, problems of....499
Puerperal Infection prevented by rectal examination ab-519
Pyelitis, infection path in....ab-520
Queries and Minor Notes....508
Quinine, effects on blood sugar....ab-515
Rabies, phenolized antirabic vaccine....ab-514
Rachitic Institute of Milan....496
Radium treatment, technic *471
therapy, anemia resulting from....498
Radius dislocation, congenital....ab-520
Rat extermination and disinfection....498
Rectum, proctostasis ab-520
Red Cross Conference, Oriental....498
Reflex, patellar, in men and women....ab-511
Roentgen Rays causes pernicious anemia..ab-522
Scarlet Fever, Caronia's test....ab-521
Serum, convalescent's, in poliomyelo-encephalitis ab-516
Sinusitis vs. bronchiectasis....ab-511
Skin cancer, radium treatment....*471
Smallpox, alastrim, and chickenpox....498
in England 495
Society Proceedings....493, 494, 510
Spasm reducing action of glucose....ab-521
Spinal Puncture in cranial injury....ab-512
Spleen diseases, epinephrine test in....ab-521
Splenectomy, erythrocytes after....ab-521
State Board Examinations....506
Stomach secretion and thyroid....ab-521
Sympathectomy, cervical, heart after....ab-517
periarterial ab-518
periarterial, in epilepsy....ab-518
Syphilis, blood changes in....ab-520
Tetany, ultraviolet ray treatment....ab-511
parathyreopriva, parathyroid extract in..ab-511
parathyroid graft treatment....496
Thoracic duct and sympathetic nerve....ab-520
Thyroid and gastric secretion....ab-521
feeding, effect on blood sugar....ab-511
Tonics and Sedatives....Adv. page 22
Trachoma and cholera cases....498
Trauma, as cause of heart block....MI-510
Trichinosis in Argentina....ab-519
Tuberculosis, activated by measles?....ab-521
heliotherapy in 498
in infants, ultraviolet rays for....ab-518
"Sanocrysin" again E-487
Tuberculosis, Pulmonary, and goiter....ab-521
blood sedimentation and diazo reaction in ab-517
in Colombo ab-515
Ulcer, protein therapy ab-520
sympathectomy for ab-518
Ultraviolet ray, effect on tetany....ab-511
Uncinariasis, treatment ab-515
University of Bari,....497
Urology, Italian congress on....ab-519
Vaccination, encephalitis and influenza after ab-522
Vagina, so-called colpitis vetularum....ab-520
Venereal Diseases, prophylaxis in army in 1924, Italy 497
Vision, physiologic aspects of glare....E-488
Vitamin B vs. beat production....ab-511
Vulva epitheliomas, treatment of....499
Wassermann Test, Bancieu's modification..ab-519
Workmen's Compensation, physician, selection of MI-510

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THE NATURE, INCIDENCE AND TREATMENT OF ENDAMEBIASIS *

PHILIP W. BROWN, M.D.

ROCHESTER, MINN.

For the last twenty-five years, the wide distribution of the endameba throughout the temperate zone has provoked much discussion. One of the most significant reports is that by Kofoid and others,[1] who examined the stools of 1,500 soldiers. They found *Endameba histolytica* present in 3 per cent. of the home service men and in 10.8 per cent. of the overseas men. It is unlikely that the incidence of this ameba is greater in Europe, but the impaired sanitary conditions of actual warfare permitted the 3 per cent. to increase to 10.8 per cent.

I have reviewed the last five years' work in the Mayo Clinic, from 1920 to 1924, inclusive. In this period the endameba was identified in 533 cases; however, less than 5 per cent. of all patients are subjected to stool tests.

INCIDENCE AND GENERAL CONSIDERATIONS OF THE ENDAMEBA

As may be seen by the map, most of the patients come from the Northwestern states, from which the Mayo Clinic draws the greater percentage of its patients. In 1916, Sanford [2] recorded a similar study. This graphic demonstration of the very wide distribution is of the greatest clinical importance. Many of the patients from the Canadian provinces have lived in those sections for years, so that no longer should the possibility of amebic dysentery be disregarded simply because the patient lives north of the Mason and Dixon line. Most of the patients from Oriental countries, Mexico and South America had been aware of the presence of the endameba, but at least 80 per cent. of those from North America had been unaware of the existence of the parasite, and it had seldom been even searched for.

For clinical purposes, three types of the endameba are considered: *Endameba histolytica, Endameba coli* and *Endameba nana*. The pathogenicity of *Endameba histolytica* seems definitely established, although at times it may not be producing active symptoms. Its occurrence in "carriers" gives rise to several questions. Many records of amebic abscess of the liver do not contain any history of diarrhea. A carrier is liable to acute dysentery if his resistance should be lowered by a debilitating disease or by a major surgical procedure. As with carriers of any pathogenic organism, they constitute a continual source for the pollution of food or water. The question comes up as to whether *Endameba histolytica* may not be a factor in certain obscure abdominal complaints associated with neurasthenic symptoms. The organism is an obligate parasite which lives and multiplies by invading the host's tissues, so that it cannot be considered entirely innocuous. The eradication of *Endameba histolytica* in the carrier stage is notoriously difficult, and demonstrates the necessity for improvement in therapeutic efficiency.

Endameba coli is usually held to be nonpathogenic, as its occurrence in the stool is not infrequent. Here again there seem to be times when this parasite becomes more active. Several such cases occur in this series. Orticoni and Gazzola,[3] in 1922, submitted a striking illustration of its pathogenicity.

Endameba nana is less thoroughly understood. It is held to be nonpathogenic. It is similar to *Endameba histolytica* except for size and motility. In a few cases in this series, it was the only parasite identified in repeated examinations, but it was not definitely proved to be the sole cause of the diarrhea.

The incidence of the various types of ameba was: *Endameba histolytica,* 511; *Endameba coli* alone, thirteen; *Endameba nana* alone, nine. Frequently they occurred together. Many times the first stool test would reveal only *Endameba coli* or *Endameba nana,* and *Endameba histolytica* was found in further examinations. *Endameba histolytica* was occasionally found associated with *Lamblia intestinalis* (nine patients). It occurred in idiopathic chronic ulcerative colitis in twenty-two. Its presence in thirteen patients with achlorhydria emphasized a valuable therapeutic consideration.

The organisms are dispersed by two main channels, food and water. Food may be infested by washing it with polluted water. In this group, green vegetables are the most common source of trouble. Food may be directly infested by direct contamination, if those who handle foods harbor the parasite. The fly is a potential distributing agent.[4] Many of the patients give a history of spells of dysentery in the family; the outhouse or cesspool is still in evidence and, finally, the well is at a favorable point to receive the sewage. Other patients have contracted the disease on hunting trips through the northern woods, where they drank from small streams. It would be hard to understand the wide distribution of the endameba if one did not realize the importance of water-borne infection.

In order to establish a working basis for the study of endamebiasis, I have separated it into three main groups.

* From the Section on Medicine, Mayo Clinic.

1. Kofoid, C. A.; Kornhauser, S. I., and Plato, J. T.: Intestinal Parasites in Overseas and Home Service Troops of United States Army, J. A. M. A. **72**: 1721-1724 (June 14) 1919.

2. Sanford, A. H.: The Geographical Distribution of Amebiasis, J. A. M. A. **67**: 1923-1926 (Dec. 23) 1916.

3. Orticoni, A., and Gazzola, M.: Enterite dysenteriforme par amoeba coli, Presse méd. **2**: 1052-1053 (Dec. 6) 1922.

4. Smith, J. G.: Amoebic and Bacillary Dysentery: A Review of Recent Literature, U. S. Nav. M. Bull. **19**: 423-430 (Oct.) 1923.

Group 1, 153 cases in which active symptoms, dysentery or liver abscess were manifested at the time of admission.

Group 2, 258 cases in which the chief complaint, or one of the complaints, was intermittent spells of diarrhea, sometimes alternating with constipation. Associated with this, there were usually reflex abdominal symptoms, borborygmus and indefinite lower abdominal distress.

Group 3, 122 cases in which the endameba was found without recorded history of dysentery. These were the pure "carrier" cases. They were discovered in the careful study of patients in whom all possible sources of infection were sought which might be factors in conditions such as dermatitis, anemia, and indeterminate intestinal diseases.

METHODS OF INVESTIGATION

The cases were investigated along the following lines: (1) history, (2) stool test, (3) proctoscopic examination, (4) barium enema and (5) gastric test meal.

History.—The patients of Group 1 had diarrhea on admission. Naturally, spells of diarrhea noted in the history, or as the presenting complaint, serve as the first indication. The duration was of no significance as it varied from one week to fifty years. Many patients had been having more or less trouble for from twenty to thirty years. There was a tendency to two or three loose stools a day, usually in the morning, with exacerbations from time to time associated with the passage of blood, pus and mucus.

It seemed noteworthy that in fifty-two cases of typical amebic proctitis in this series, twenty-four occurred in the year 1924. Amebiasis may be growing more prevalent, or this may be merely an accidental occurrence.

The patients of Group 2 had had spells of diarrhea, alternating with normal to constipated movements. Blood or pus was seldom noted. Acton and Knowles [5] believe that *Endameba histolytica* is always associated with minor ulcerations in the colonic mucosa, but in this group repair keeps pace with destruction. Many patients complained of borborygmus, pain over the region of the appendix or gallbladder, and reflex gastric symptoms. Previous diagnoses of appendicitis or cholecystitis were common. Distress in the upper right quadrant of the abdomen is of moment since a hepatic abscess may be forming or the hepatitis, in which the French and English have been particularly interested, may be present. The pain may be referred from the cecum and ascending colon.[6]

The patients of Group 3 are likely to have exacerbations of dysentery following a major surgical procedure or during any debilitating illness, such as influenza.

Stool Test.—The diagnosis depends largely on the identification of the endameba. It is absolutely necessary that the stool should not be allowed to cool before examination. My practice is to examine a freshly passed stool following catharsis induced by from half to 1 ounce (from 15 to 30 gm.) of magnesium sulphate taken before breakfast. In case the first stool is negative, further specimens on successive days are examined. In 340 cases (68.2 per cent.), *Endameba histolytica* was found in the stool on the first test; in 115 cases (23.3 per cent.), it was not found until the second test; in thirty-five cases (6.8 per cent.), it was found in the third test; in six cases (1.2 per cent.), in the fourth test; in one case, in the fifth test, and in two cases, in the seventh test. Thus it shows that a series of three examinations of the stool on successive days insures finding the endameba in 98 per cent. of the cases if it is present. It indicates, equally well, the inadequacy of one examination in 30 per cent. of the cases.

Proctoscopic Examination.—The second most useful aid to the diagnosis of amebiasis is the proctoscopic examination. Patients of Groups 2 and 3 did not have gross lesions of the bowel, so the rectal examination was negative. In the case of ulcerative colitis, however, with the presence of endameba in the stool, the true diagnosis is not made until the proctologist submits his report.

In the cases of typical amebic proctitis, there were varying numbers of discrete, punched-out ulcers with normal mucosa between them, a very decided contrast to the generalized involvement in cases of ulcerative colitis. In a few cases, the stool tests were negative, but the endameba was demonstrated by taking swabbings from the base of an ulcer and washing the material onto a slide.

Barium Enema.—The roentgenogram was of negative rather than positive value. In a few cases at the time of an acute attack, there was a spastic filling defect in the cecum, or the sigmoid was spastic. As it is known that the endameba is most common in the cecum, the local activity during an acute outbreak of colitis tends to produce lesions in the cecum similar to those in the rectum; the roentgenologic findings are the result. This is not a permanent lesion, as the barium enema is negative after treatment. The roentgen ray may reveal a contracture of the rectum and sigmoid in cases of amebic colitis of long standing. The extensive contracture and change throughout the colon which are seen in cases of chronic ulcerative colitis do not seem to occur in true amebic colitis.

Gastric Test Meal.—Treatment may be influenced by the results of gastric analysis. Diarrhea, which has a fairly steady course without gross evidence of ulceration in the bowel, may be more influenced by achlorhydria than by the coexistent endameba. Supplementing the antiamebic treatment with dilute hydrochloric acid will do much to effect complete relief from the intestinal symptoms.

THE PATHOGENICITY OF ENDAMEBA COLI AND ENDAMEBA NANA

There are cases in which only these two parasites are identified, and in which these organisms seem to have become pathogenic, as believed by Orticoni and Gazzola. *Endameba nana* and *Endameba coli* occur so frequently without any associated intestinal symptoms that it seems difficult to consider them pathogenic. I feel that they are parasites which will thrive in sufficient numbers to produce actual symptoms, if the body tissues are altered by factors such as nervous strain, endocrine malfunction, or dietary deficiency. McCarrison [7] has demonstrated the colonic disturbances in monkeys, produced by a deficient diet. Introduction of the endameba, after a course of deficient diet, resulted in an intense diarrhea without ulceration. He believes that the gastrointestinal tract's functional perfection is dependent, to a considerable extent, on adequate provision of the vitamins and salts found in fresh vegetable foods. If the body's resistance and its metabolic processes can be restored to normal, the parasites will be eliminated or will assume their normal nonpathogenic state. The

5. Acton, H. W., and Knowles, R.: Of Entamoeba Histolytica Carriers, Indian M. Gaz. **59**: 440-444 (Sept.) 1924.

6. Carnot, Paul: Les colites, Paris, J. B. Baillière et fils, 1923, p. 46. Paisseau, G., and Hutinel, Jean: Hepatitie amibienne chronique, Ann. d. méd. **6**: 50-62 (May) 1919.

7. McCarrison, Robert: Studies in Deficiency Disease, London, Frowde, 1921, pp. 98 and 104.

response to treatment with iodin or emetin is nonspecific; the drugs may restore those functions, the disturbance of which has been the primary cause of the disease. The parasites cease to cause trouble when the level of the host's resistance is high enough. To pursue this subject would entail a discussion of the systemic processes that underlie many or perhaps all diseases.

In five cases in this series, three or more stool tests showed only *Endameba coli* and in three cases only *Endameba nana*. A few other cases occurred, but only one or two stools had been examined, and no conclusions were drawn. All the patients had spells of diarrhea with from three to twenty stools a day, flatulence, nausea and abdominal pains.

Three of the five patients with *Endameba coli* were treated with emetin, coal oil enemas, and chapparo. One was also given tincture of iodin by mouth. All three responded well to treatment. Two patients with *Endameba nana* received the same course of emetin, and again the results were good, three stools being negative after treatment. Such therapeutic tests are worth something in arguing pathogenicity, but I do not wish to offer them as proof, since repeated examinations might have disclosed the presence of *Endameba histolytica;* but clinically, they must be considered as possible offenders and treated as such in cases of doubt.

TREATMENT

No disease responds so magically as acute amebic dysentery to the first two injections of emetin. Yet the eradication of the parasites, the prevention of recurrences and the overcoming of individual intolerance to forms of treatment constitute a baffling triad. The acute symptoms rapidly subside, but any laxity on the part of either physician or patient paves the way for a relapse. The patient with chronic amebic diarrhea who takes emetin in small doses for a long time [9] seems to become "emetin-fast," a condition comparable to what occurs, for example, in the treatment of *Spirochaeta pallida* with arsenic. Emetin, intravenously, has been suggested,[9] but I have not felt warranted in injecting it directly into the blood stream since the procedure is attended with no small risk.

The remedies for treating endamebiasis are legion: (1) ipecac, either in phenyl salicylate or keratin coated pills, as emetin hydrochlorid for hypodermic use, or in emetin bismuth iodid tablets; (2) fluidextract of chapparo amargoso; (3) tincture of iodin; (4) arsphenamin or neo-arsphenamin; (5) bismuth subnitrate in large doses, and (6) colonic irrigation or enemas of sodium chlorid, kerosene, quinin hydrochlorid, chapparo amargoso, iodo-oxybenzenephyridin sulphonate ("Yatren"), and so forth. Appendicostomy has been performed to afford opportunity for more thorough colonic irrigations, but not in this series. Ipecac, with its active principle, emetin, has formed the background for most forms of treatment, but the multiplicity of drugs shows that the ideal has yet to be found. Subjective relief is rapidly obtained, but to insure the entire destruction of the endameba is another matter. The very nature of *Endameba histolytica* is against this, as the situation of the parasite in the intestinal mucosa affords it protection. The question of reinfection, rather than recurrence, cannot be overlooked. Treatment seems to favor encystment, and the cysts are far more resistant to treatment than the active endameba. In some cases emetin given at intervals during a month seems to retard encystment as well as to destroy the parasite as it passes from the cystic stage.

Arsphenamin and neo-arsphenamin were first introduced in the treatment of amebic disease by Milan,[8] in 1911, who observed a cure of amebiasis while administering antisyphilitic treatment. The organic arsenic offers the same advantage as intramuscular emetin in that it is carried by the blood and excreted through the bowel, or at least circulates through its blood vessels. A more recent form of arsenic, stovarsol, was used in the treatment of syphilis, in 1922, by Levaditi [10] and his co-workers, and in amebiasis by Marchoux [11] in 1924. This drug can be given by mouth, which is the ideal method. Preliminary reports of this drug are favorable, but it will probably be another aid rather than a cureall.

Cases of endamebiasis according to states.

All medication by irrigation of the bowel or enemas is of value, but since the endameba's habitat is the interstices of the mucosa and the submocosa, it is probable that a cure by this method is not theoretically possible. Iodo-oxybenzenepyridin sulphonate,[12] recently suggested by the Germans, is used as an irriga-

8. Low, G. C.: Emetine Bismuth Iodide in Amoebic Dysentery, Amoebic Hepatitis, and General Amoebiasis, Lancet **1**: 482-485 (March 31) 1917. Milan, quoted by Ravaut, P., and Krolunitsky, G.: Le traitement mixte de la dysenterie amibienne, Paris méd. **7**: 18-24 (Jan. 6) 1917.

9. Bensaude, R.; Cain, A., and Rachet, J.: Les injections intraveineuses de chlorhydrate d'emetine dans le traitement de la dysenterie amibienne, Bull. et mém. Soc. méd. d. hôp. de Paris **48**: 662-670 (May 9) 1924.

10. Levaditi, Martin, Fournier, Guenot and Schwartz: Recherches sur l'action curative et preventive de l'acide acetyloxyaminophenylarsinique, Ann. de l'Inst. Pasteur **36**: 729-746 (Nov.) 1922.

11. Marchoux, E.: Action du stovarsol, Paris méd. **53**: 421-426 (Nov. 22) 1924.

12. Menk, W.: Weitere Erfahrungen über die Beeinflussung infektiöser Darmkrankheiten durch "Yatren," mit besonderer Berücksichtigung der chronischen Amöbenruhr, München. med. Wchnschr. **69**: 1280-1282 (Sept. 1) 1922.

tion. It is very expensive and has not been tried in the clinic. In acute cases a bland, nonresidue diet should be given. Fantham [13] demonstrated that skatol, a protein decomposition product, favored encystment of *Endameba coli*. This would suggest that a low protein diet during treatment might aid in preventing encystment.

There are laboratory data concerning the results in 115 of the 197 cases treated at the Mayo Clinic. In many cases treatment was commenced here, but it was

TABLE 1.—*Results of Treatment in Group 1*

	Two to Seven Stool Tests Negative after Treatment		Stool Tests Positive after Treatment	
	Patients	Courses	Patients	Courses
Emetin hydrochlorid, coal oil and chapparo (usually)	22	1	19	2 to 3
Emetin followed by arsphenamin	2	2	1	3
Emetin followed by emetin bismuth iodid	1	2	...	...
Emetin followed by emetin bismuth iodid and arsphenamin	5	2 to 5	1	3
Phenyl salicylate ipecac only	3	1	3	1
Phenyl salicylate ipecac followed by emetin (one with alcresta ipecac)	4	2	...	...
Phenyl salicylate ipecac followed by emetin and arsphenamin	1	3	...	...
Arsphenamin only	2	1	...	...
Total	41		24	

completed elsewhere and I have no knowledge of the results. It is logical to assume that the number of those who followed out treatment at home would represent a larger percentage of cures than of failures, since the latter are more likely to be reported. The chief methods of treatment during this five year period were (1) phenyl salicylate coated ipecac pills given in decreasing doses; (2) from 12 to 18 grains (0.8 to 1.2 gm.) of emetin hydrochlorid administered hypodermically in the course of four weeks, supplemented by chapparo amargoso by mouth, and enemas of one quart of kerosene; (3) arsphenamin with or without the preceding; (4) emetin bismuth iodid; (5) bismuth subnitrate or salicylate as a "follow-up" after the course of emetin was completed, and (6) cephalin and adsorbed emetin in a few instances.

Ipecac or emetin has been the mainstay in treatment, and has given the best results. Its failure may be attributed to too small a dose actually to kill the parasite; its action is on the host rather than on the parasite. The patient and not the drug may be blamed for failure to effect a cure.[14] I have held to the presence or absence of the endameba in the stool as the criterion for failure or cure. Many patients were not able to remain for stool tests after treatment, so that only clinical results could be noted. These results are usually encouraging from the patient's point of view but must not be given too much weight as the only true cure depends on the elimination of the endameba. Of the 533 cases of recognized endamebiasis, only 115 were treated and fully investigated. Of these, sixty-five were in Group 1, forty-five in Group 2, and five in Group 3.

Group 1.—In about 70 per cent. of the cases, the stool tests were negative after one course of treatment; the stools were usually examined at the conclusion of the treatment. In the remaining 30 per cent., from two to five varying courses of treatment were required to effect an apparent eradication. Emetin hydrochlorid was preferred to the phenyl salicylate coated ipecac tablets, as the latter method produced more or less severe gastric symptoms in many patients, and necessitated longer detention in the hospital.

The emetin course was given in forty-two cases (Table 1). There were twenty-three patients apparently cured by this course and nineteen failures. The emetin course had been used first in the treatment of two other patients who were not cured by further treatment and in eight who responded to other drugs. Thus, in the cases of active amebic dysentery treated by emetin either alone or followed by other medication, the drug was effectual in only twenty-three (43 per cent.). It must not be overlooked that this course may have been a definite adjunct in effecting a favorable result in eight other cases.

Too little emetin may have been given. While the average amount administered in the course of four weeks was 12½ grains (0.8 gm.), yet many patients received 18 grains (1.2 gm.). As from 22 to 24 grains (1.4 to 1.5 gm.) has been held to be the maximal dosage of emetin a month before neuritis is produced, I have limited the dose to from 18 to 20 grains (1.2 to 1.3 gm.); if the patient is dismissed, I have advised only from 12 to 16 grains (0.8 to 1 gm.) in a month's course. The neuritis has been produced by as small an amount as 6 grains (0.4 gm.), but the average adult will usually tolerate the larger dosage without such complication.[15]

In ten out of nineteen cases of ulceration there were definite recurrences. The percentage of recurrence might be increased if further data, such as the results of the final examination of the stool, had been available in all cases. The cases of amebic ulcerative proctitis constitute 41 per cent. of the refractory cases.

Group 2.—There are available data in forty-five cases including nine cases of chronic ulcerative colitis with associated amebiasis. Many patients of Group 2 showed evidence of peptic ulcer, cholecystitis or appendicitis, and gave a history of diarrhea. Antiamebic treatment was often instituted first to rule out the relationship of the ameba to the presenting symptoms. Even when the ameba was apparently eliminated, the abdominal symptoms were not always relieved until other conditions had been corrected, as the following cases illustrate:

TABLE 2.—*Results of Treatment in Group 2*

	Stool Tests Negative after Treatment		Stool Tests Positive after Treatment	
	Patients	Courses	Patients	Courses
Emetin hydrochlorid, usually with coal oil enemas and chapparo amargoso	12	1 to 2	10	1
Emetin hydrochlorid followed by emetin bismuth iodid	3	1 to 3	...	...
Emetin hydrochlorid followed by arsphenamin	1	2	...	...
Emetin followed by phenyl salicylate ipecac	...	...	1	1
Phenyl salicylate ipecac only	4	1	...	...
Phenyl salicylate ipecac followed by arsphenamin	1	2	...	...
Chapparo amargoso only	1	1	...	...
Arsphenamin only	3	1	...	...
Total	25		11	

CASE 1.—A woman came to the clinic from Canada, complaining of attacks of upper right abdominal pain associated with spells of diarrhea. *Endameba histolytica* was found in

13. Fantham, H. B.: On the Amoebae Parasitic in the Human Intestine, with Remarks on the Life-Cycle of Entamoeba Coli in Cultures, Ann. Trop. Med. & Parasitol. 5: 111-123, 1911.

14. Dale, H. H., and Dobell, Clifford: Experiments on the Therapeutics of Amoebic Dysentery, J. Pharmacol. & Exper. Therap. 10: 399-459 (Dec.) 1917.

15. Strong, R. P.: Amebiasis, Nelson's Loose Leaf Medicine 2: 331, 1920.

the stool. A diagnosis of cholecystitis had been made, and operation advised elsewhere. The diagnosis here was probable cholecystitis and endamebiasis. A course of emetin hydrochlorid was given, following which she improved markedly and all symptoms subsided. Operation was not deemed necessary. A letter several months later reported that she was still in excellent health.

CASE 2.—A woman from South Dakota complained of pains and gastric symptoms associated with spells of alternating constipation and diarrhea. Diagnosis of duodenal ulcer and endamebiasis (*Endameba histolytica*) was made. She was given antiamebic treatment. She returned in a year with the same abdominal symptoms, although the stools were now negative for the endameba. Operation for the ulcer was advised.

TABLE 3.—*Results of Treatment in Group 3*

	Stool Tests Negative	Stool Tests Positive
Arsphenamin alone (average four injections)	7	4
Arsphenamin following failure of emetin (average 24 grains) (average four injections)	5	1
Arsphenamin following failure of emetin and phenyl salicylate ipecac	1	..
Arsphenamin following failure of emetin and emetin bismuth iodid (36 to 108 grains)	4	..
Total	17	5

Both of these cases might be considered favorable, but from the clinical side only one patient was fully benefited by the antiamebic treatment. It is necessary to understand this interpretation in order to evaluate the tables of results, more particularly in cases of Group 2 than of Group 1.

When the history is similar to that in Case 2, it is wiser to try a therapeutic test first, resorting to operative treatment later if necessary. Many cases of "chronic appendicitis" are cured by antiamebic treatment. The endameba, like constipation, may cause the right-sided pain, and operation may be avoided when such a cause is recognized.

In the twenty-five cases (Table 2) the patients were benefited by their treatment, and seemed to be free from the endameba.

In eleven cases (Table 2) the parasite was not destroyed. Twenty-two patients in Group 2 received only the emetin course, and a favorable response was shown in twelve, or 57 per cent. While this percentage is higher than was found in Group 1, the difference is not sufficient to prove either that the infection is less virulent in Group 2 or that the systemic resistance is higher.

There were twenty-two cases of chronic ulcerative colitis with associated endamebiasis. The ameba is not considered to play more than a secondary part in the colitis, but antiamebic measures are justified.[16] There is usually a certain amount of improvement from this treatment. Of the twenty-two cases, treatment eradicated the parasite in the nine in which there are data. A possible pitfall has been mentioned; the disease is or is not ulcerative colitis, depending on the proctoscopic findings, and to a lesser extent, on the roentgenogram of the colon.

Group 3.—This small group of only five cases in which there are data is characterized by diverse symptoms: pernicious anemia, achlorhydria as the only finding, dermatitis and constipation. In three cases the endameba disappeared after courses of emetin and phenyl salicylate ipecac. In two cases, the parasite persisted after 8 and after 21 grains (0.6 and 1.36 gm.) of emetin hydrochlorid. It is of interest to note that in seventeen other patients treated in this group there was no definite clinical benefit, so far as their complaint was concerned, derived from the antiamebic treatment. While one is justified in trying a course of treatment, the prognosis must be guarded so far as relief from symptoms is concerned.

16. Logan, A. H.: Personal communication to the author.

VALUE OF ARSPHENAMIN OR NEO-ARSPHENAMIN

The organic arsenic compounds have been used more and more. In this series, arsphenamin or neo-arsphenamin has been the only form tried. In ten out of eleven cases in which other treatment had been unavailing, the arsphenamin finally eliminated the endameba (Table 3). I believe that this drug in conjunction with one of the emetin group offers a desirable method of attack. Gunn [17] has also had better results with this combined form of treatment.

COMMENT

The effectiveness of treatment measured by the presence or absence of the endameba is summarized from Groups 1 and 2 (Table 4); that is, with regard to the 101 patients about whom there are data, exclusive of the nine with ulcerative colitis.

Comparative results as to the preferred form of treatment are difficult. Further treatment is often effective in eliminating the endameba, so that of the thirty-five cases in which the parasite persisted, some would surely fall in the negative group on more persistent treatment. The most important point is that one course of any form of treatment will be effective in from 60 to 75 per cent. of the cases observed during a year. This figure can be bettered by following up the cases and instituting a change of treatment. The emetin hydrochlorid course is of value in the acute phase, but it should be supplemented by other forms of treatment. Eighty-five patients received the emetin course primarily. In thirty-five (41 per cent.), it seemed to effect a favorable result without other treatment, and was probably an aid in eighteen others. In twenty-nine (34 per cent.), it failed to eradicate the parasite, and further treatment in six more was unavailing.

TABLE 4.—*Results of Treatment in Groups 1 and 2* *

	Stool Tests Negative	Persistent Ameba
Phenyl salicylate ipecac	7	3
Phenyl salicylate ipecac followed by emetin	4	1
Phenyl salicylate ipecac followed by arsphenamin	1	..
Phenyl salicylate ipecac followed by emetin and arsphenamin	1	..
Emetin hydrochlorid	35	29
Emetin followed by emetin bismuth iodid	4	..
Emetin followed by emetin bismuth iodid and arsphenamin	5	1
Emetin followed by arsphenamin	3	1
Arsphenamin	5	..
Chapparo amargoso only	1	..
Total	66	35

* Excluding chronic ulcerative colitis.

CONCLUSIONS

1. *Endameba histolytica* is "being heard from" more and more throughout the temperate zone. There must be more attention to uncooked foods and the drinking water supply if the disease is to be avoided and controlled.

2. Repeated examinations of stools are essential to the diagnosis of all forms of dysentery. In this series, positive findings occurred in only 68 per cent. of the first examinations but jumped rapidly to 92 and 98 per cent. in the second and third tests.

17. Gunn, H.: Amebiasis: Its Radical Cure with Combined Emetin and Salvarsan Products, California State J. Med. **16**: 240-244 (May) 1918.

3. A proctoscopic examination is absolutely necessary to distinguish amebic ulcerative colitis from idiopathic ulcerative colitis.

4. To establish a cure is exceedingly difficult; repeated tests of the stool must be made over a period of months, and reinfection must be prevented. For that reason, I have been careful to refer only to negative or positive tests after treatment.

5. Ipecac or its derivatives do not seem to be effectual in more than from 58 to 70 per cent. of the cases. Many other authors report similarly.

6. Emetin and arsphenamin seem to be a useful combination.

7. A few cases occurred in which *Endameba coli* was the only parasite found. This and *Endameba nana* may be pathogenic in some cases.

8. It is advisable to persist with the resistant case, rather than to temporize from time to time. The parasite can eventually be eradicated.

ANEMIA IN HYPOTHYROIDISM *

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By means of extirpation experiments and from observations on the effects of administering thyroid gland preparations, it has been shown by Esser,[1] Mansfield,[2] Kishi [3] and others, that: (*a*) after thyroidectomy, dogs and rabbits show a decrease in red cells and hemoglobin amounting usually to about 30 per cent; (*b*) in animals with an experimentally produced anemia, regeneration is retarded by thyroidectomy; (*c*) administration of thyroid gland to normal animals may cause an increase of red blood cells up to 15 per cent. For the purpose of this paper it is not necessary to review these experiments in detail. They indicate that under controlled conditions it can be shown that the thyroid hormone exerts a certain influence on hematopoiesis.

THE THYROID AND HEMATOPOIESIS

Numerous clinical observations (Kocher,[4] Falta,[5] Bence and Engel,[6] Janney and Engel,[7] Hutton [8]) also provide unmistakable evidence that disturbances of the thyroid function may cause slight or marked alteration in the blood picture. Since Kocher's [4] studies it has been known that in hyperthyroidism there is frequently a relative or absolute increase in lymphocytes, diminution of the polymorphonuclear cells and a normal or slightly increased red cell count. Kocher also described leukopenia and prolonged coagulation time. In hypothyroidism, too, blood changes occur with great frequency. The most frequent alteration in the leukocyte formula is a relative or absolute lymphocytosis [9] similar to that which occurs in hyperthyroidism. There may also be a leukopenia and occasionally an eosinophilia.[6] Anemia in hypothyroidism, however, especially anemia with only slight development of the familiar signs and symptoms of myxedema, has received very little attention. Textbooks dismiss the matter with a statement to the effect that there is usually or regularly some diminution in red cells and hemoglobin.

In 1883, Kocher [4] reported the results of red cell counts on seventeen patients on whom he had done complete thyroidectomy. The majority of these showed a decrease in red cells which in general paralleled the development of cachexia thyreopriva symptoms. The lowest red cell figure was 2,168,000. Falta [5] and Fonio [10] observed cases of myxemia with moderate or marked anemia, and the latter found that the effect of thyroid therapy in restoring the blood to normal was proportional to the amount of iodin in the preparation administered. These observations dealt with patients in whom clinically obvious thyroid deficiency existed. Unverricht [11] mentions a group of anemias "with clinically noticeable or sometimes only a presumptive hypofunction of the thyroid" (mit klinisch bemerkbarer, manchmal auch nur vermuteter Hypofunktion der Schilddrüse) in which the erythrocyte counts were from 3,030,000 to 3,780,000 and the hemoglobin from 48 to 56 per cent. He makes no mention of the basal metabolic rates of these patients, and clinical details are omitted. He reports an improvement in the blood count on thyroidin treatment. Two recent papers, one by Baker [12] and the other by Warfield and Greene,[13] report cases showing a relation between thyroid deficiency and an anemia resembling chlorosis. These papers will be referred to again. From the cases described below it appears that this chlorotic type of anemia, with relatively high red cell counts and low hemoglobin, is not the only form in which hypothyroid anemia may occur. The clinical resemblance to pernicious anemia may in some cases be close; and, as the following case reports reveal, the familiar symptoms of hypothyroidism may be quite inconspicuous.

REPORT OF CASES

CASE 1.—J. C., aged 52, a clergyman, was admitted to the Presbyterian Hospital, April 22, 1921, complaining of weakness with numbness and tingling of the feet and hands which had been increasing for a year. There was nothing significant in the family history. He was born in England, and he recalled having had none of the contagious diseases of childhood. Until eleven years before coming under observation, he had been a missionary in Jamaica and Java. In the tropics he had typhoid, malaria and mild dysentery. Four years before admission, he went to France as chaplain in the Marine Corps. He had a severe war experience but soon recovered his previous vigor. Throughout his life he had been strong and very active.

About a year before admission, he began to tire easily and had to rest during the day. He could not walk more than a few blocks without becoming so tired that he had to sit down, and stair climbing caused unusual breathlessness. He noticed also that he perspired less than he previously had and became more sensitive to cold. His hands and feet were at times cold and numb, and in them he had a tingling sensation. He became irritable and nervous. His appetite diminished, and he noted a distinct change in his complexion. He did not think that there had been any mental impairment, change in

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1. Esser: Blut und Knochenmark nach Ausfall der Schilddrusenfunktion, Deutsch. Arch. f. klin. Med. **89**: 576, 1907.
2. Mansfield, G.: Die Blutbild und die Schilddruse I Magyar Orvosi Archivun **13**: 188, 211, 1912; quoted by Unverricht (Footnote 11).
3. Kishi, K.: Beiträge zur Physiologie der Schilddruse, Virchows Arch. f. path. Anat. **176**: 260, 1904.
4. Kocher, T.: Das Blutbild bei Cachexia thyreopriva, Arch. f. klin. Chir. **99**: 280, 1912; Ueber Kropfextirpation und ihre Folgen, ibid. **29**: 254, 1883; die Schilddrusenfunktion, Cor-Bl. f. Schweitz. Aerzte, 1895.
5. Falta, W.: The Ductless Glandular Diseases, Philadelphia, P. Blakiston's Son & Co., 1915.
6. Bence, J., and Engel, K.: Ueber Veranderung des Blutbildes bei Myxödema, Wien. klin. Wchnschr. **21**: 905, 1908.
7. Janney, N. W., and Engel, H. E.: Concerning the Diagnosis and Treatment of Hypothyroidism, Arch. Int. Med. **26**: 297 (Sept.) 1920.
8. Hutton, J. H.: Differential Blood Count in Hypothyroidism, Illinois M. J. **45**: 272 (April) 1924.
9. Kocher (Footnote 4). Hutton (Footnote 8).
10. Fonio, A.: Ueber den Einfluss von Basedowstruma und Kolloidstrumapräparaten und Thyreodin auf den Stickstoffwechsel und das Blutbild von Myxödem unter Berucksichtigung ihres Jodgehaltes, Mitt. a. d. Grenzgeb. d. Med. u. Chir. **24**: 123, 1911, 1912.
11. Unverricht: Thyroidea und Erythropoese, Klin. Wchnschr. **2**: 166 (Jan. 22) 1923.
12. Baker, W. A.: Dysthyroidism, a Factor in Secondary Anemia, J. Kansas M. Soc. **24**: 321 (Nov.) 1924.
13. Warfield, L. M., and Greene, I. W.: Hypothyroidism and Its Relationship to Chlorotic Anemia, J. Michigan M. Soc. **24**: 79 (Feb.) 1925.

weight, or alteration in the quality or quantity of hair. He did not have constipation.

The patient was well nourished and mentally alert. The lips were a little blue; the skin of the face was pale and distinctly yellow. The yellowness of the skin was particularly noticeable about the eyes and malar regions, and also on the hands and forearms. The quality, quantity and distribution of hair showed nothing abnormal. The skin was dry and the hands and feet were cold. The general physical examination showed nothing else of significance. The thyroid was barely palpable; neither the spleen nor the liver was enlarged. The reflexes were active. The blood pressure was 100 systolic and 75 diastolic. The temperature varied from 98 to 99.4 F.; the pulse, from 60 to 74, while under observation; the respiration, from 18 to 20. The Wassermann reaction was negative. The blood urea was 0.41 gm. per liter, and the blood uric acid was 4.7 mg. per hundred cubic centimeters. The urine showed no albumin, sugar, casts or bile. No ova or parasites were found in the stool. In the urine there was no urobilin and in the stool only the normal amount. On admission, the blood count was: red blood cells, 3,150,000; hemoglobin, 60 per cent.; index, 0.95. The basal metabolic rate was —44. The blood counts, basal metabolic rates and thyroid therapy of the patient are shown in Table 1 (Case 1).

tions, the roentgenogram of the gastro-intestinal tract and the urobilin excretion revealed nothing abnormal. Gastric analysis showed no free hydrochloric acid; total acid was from 6 to 10. The temperature was a fraction of a degree above or below 98.6 F., while under observation; the pulse was from 80 to 100; the respiration from 20 to 22; the systolic and diastolic blood pressures were 128/60 to 134/70. The blood count was: red blood cells, 3,350,000; hemoglobin, 68 per cent.; index, 1.01; white blood cells, 6,500; polymorphonuclears, 68; eosinophils, 1; lymphocytes, 29, and monocytes, 2. There were slight poikilocytosis and anisocytosis, but no nucleated red cells. The basal metabolism rate was —18.

The record of the blood counts, basal metabolic rates and thyroid therapy of this patient are given in Table 1 (Case 2). Her improvement was slow but definite, and eventually she made, on thyroid treatment, a nearly complete recovery. At the time of admission to the hospital, weakness, palpitation and dyspnea made it impossible for her to continue her university work. After starting thyroid treatment, she returned to work and at the end of the year secured her degree. While under observation, however, she never quite attained a normal capacity for physical and mental effort. The data shown in Table 1 bring out an interesting resistance in her basal metabolic rate to thyroid administration; on 0.6 gm. of thyroid a

TABLE 1.—*Record of Blood Counts, Basal Metabolic Rates and Thyroid Therapy in Three Cases*

Case; Name; Age	Date	Hemoglobin (Sahli)	Red Blood Cells	Index	White Blood Cells	Neutrophils	Basophils	Eosinophils	Lymphocytes	Monocytes	Anisocytosis	Poikilocytosis	Nucleated Red Blood Cells	Basal Metabolic Rate	Thyroid, Gm. Daily	Comment
1 J. C. 52 yr.	4/24/21	60	3,150,000	0.95	7,000	43	2	7	42	4	+	+	0	—44	0.06-0.1	
	6/ 6/21	95	4,100,000	1.16	6,700	51	0	6.5	40.5	2	0	0	0	—31	0.15	Marked improvement
	9/ 2/21	..	.....	....	.....	..	...	...	..	...	..	..	...	—17	0.15	
	3/20/24	115	5,048,000	1.14	6,300	57	0	6	34	3	0	0	0	— 8		No symptoms
2 M. H. 25 yr.	10/11/23	68	3,350,000	1.01	6,500	68	0	1	29	2	+	+	0	—	—	Wt., 56.9 kg.
	11/ 2/23	62	3,570,000	0.87	5,000	65	4	1	29	1	+	+	0	—18	— 0.06	
	11/26/23	66	4,400,000	0.75	5,400	68	0	1	29	2	+	+	0	—19	0.06-0.3	Improved; Wt., 60.4 kg.
	1/ 7/24	62	4,860,000	0.64	7,000	62	1	0	32	5	±	±	0	— 7	0.3-0.6	Improved; Wt., 59 kg.
	2/12/24	85	5,300,000	0.80	7,600	61	2	1	32	4	±	±	0	—15		
	2/25/24	..	.....	....	.....	..	...	...	..	...	..	..	...	— 9	0.5-0.6	Wt., 58.2 kg.
	3/24/24	..	.....	....	.....	..	...	...	..	...	..	..	...	— 6		Influenza
	4/28/24	..	.....	....	.....	..	...	...	..	...	..	..	...	—10		Much improved
3 J. O. 58 yr.	11/17/24	77	3,770,000	1.02	5,800	48	0	9	38	5	0	0	0	—37	0.1	
	2/28/25	..	.....	....	.....	..	...	...	..	...	..	..	...	— 9		
	4/ 3/25	65	4,000,000	....	7,100	59	...	4	36	1	0	0	0	....		Marked improvement

His improvement on thyroid gland administration was rapid and marked. Within a month he was again feeling strong, working from twelve to eighteen hours a day and preaching as many as six times on Sundays. Some months later he went to Haiti and while there took no thyroid for six weeks. His strength failed, he became pale and the old symptoms returned but were less severe than at the outset. Resumption of thyroid administration promptly restored his vigor.

CASE 2.—M. H., a woman, aged 25, single, a graduate student at Columbia University, admitted, Nov. 9, 1923, for eight years had been treated for anemia. The hemoglobin, she said, had usually been between 50 and 60 per cent.; on one occasion, it had been 38 per cent. Symptoms were weakness, palpitation and dyspnea on exertion, sensitiveness to cold, and pallor; her weight had been stationary for several years. The menses were normal; the bowels were not constipated.

The patient was well nourished, pale and mentally alert. Physical examination revealed: eyes prominent but not definitely exophthalmic; ears, teeth and throat normal; no tremor of hands; slight enlargement of thyroid; hair normal in quality, quantity and distribution; no puffiness of face; lungs clear; heart not enlarged; regular and with no murmur; right kidney palpable; liver and spleen not felt; no abdominal tenderness or masses; reflexes active; skin not abnormally dry; no edema. The Wassermann, urine and stool examinations, the roentgenogram of the gastro-intestinal tract and the urobilin excretion revealed nothing abnormal. Gastric analysis showed no free hydrochloric acid; total acid was from 6 to 10. The temperature was a fraction of a degree above or below 98.6 F., while under observation; the pulse was from 80 to 100; the respiration from 20 to 22; the systolic and diastolic blood pressures were 128/60 to 134/70. The blood count was: red blood cells, 3,350,000; hemoglobin, 68 per cent.; index, 1.01; white blood cells, 6,500; polymorphonuclears, 68; eosinophils, 1; lymphocytes, 29, and monocytes, 2. There were slight poikilocytosis and anisocytosis, but no nucleated red cells. The basal metabolism rate was —18.

The record of the blood counts, basal metabolic rates and thyroid therapy of this patient are given in Table 1 (Case 2). Her improvement was slow but definite, and eventually she made, on thyroid treatment, a nearly complete recovery. At the time of admission to the hospital, weakness, palpitation and dyspnea made it impossible for her to continue her university work. After starting thyroid treatment, she returned to work and at the end of the year secured her degree. While under observation, however, she never quite attained a normal capacity for physical and mental effort. The data shown in Table 1 bring out an interesting resistance in her basal metabolic rate to thyroid administration; on 0.6 gm. of thyroid a day her rate was —15; before starting thyroid it was only —18. That this was not due to imperfect absorption from the gastro-intestinal tract only seems to have been shown by the occurrence of tremor and palpitation when taking this amount, and also by the striking improvement in the blood count. It is also of interest that her weight increased while taking thyroid.

CASE 3.[14]—Mrs. J. O., aged 58, for seven years had increasing weakness, loss of appetite, failing vision, great sensitiveness to cold, increase in weight and mental deterioration. Examination showed obesity, lemon yellow pallor and puffy face, and slow, unsteady movements. The skin was dry and the hands were cold. The axillary hair was absent, and the scalp was covered by a thin growth of hair. The thyroid was not enlarged; there was slight pitting of the ankles. The blood count was: red blood cells, 3,770,000; hemoglobin, 77 per cent.; index, 1.02; white blood cells, 5,800; polymorphonuclears, 48; eosinophils, 9; lymphocytes, 38, and monocytes, 5; there was no poikilocytosis, anisocytosis or nucleated red cells. The basal metabolic rate was —37.

Additional data are shown in Table 1 (Case 3). Obviously this patient had very definite symptoms of myxedema; the record is included in this report only because anemia was the outstanding clinical fact.

14. I am permitted to include the record of this patient through the courtesy of Drs. Paul Sheldon and Albert Lamb.

COMMENT

It is of interest that in all three of these patients a diagnosis of pernicious anemia had been made prior to determination of the basal metabolic rate. The age of occurrence of this anemia in association with a yellow tinging of the skin, the hemoglobin index near or above 1.0, paresthesia of the hands and feet and none of the usual causes of secondary anemia demonstrable, constitute a group of clinical facts arousing at least a suspicion of primary anemia. Only one of the three patients had a gastric analysis, and this examination showed an absence of free hydrochloric acid. In two of the patients, urobilin excretion was determined and showed no increase. That the anemia of these patients was not merely a concomitant of the hypothyroidism and due to some other unrecognized cause is a conclusion justified by the effects of thyroid therapy, which was the only form of treatment employed. No iron, arsenic or transfusions were given. For differential diagnosis, the symptoms of sensitiveness to cold, diminished perspiration, a yellow tinge of the skin about the eyes and malar regions are important. Determination of the basal metabolic rate and the urobilin excretion supply, however, the most essential data for a diagnosis.

A recent paper by Baker [12] reports clinical observations on a 16 year old girl apparently suffering from hypothyroidism and anemia, but no basal metabolism determination was recorded and the therapy on which the anemia cleared up included iron, arsenic, hydrochloric acid and desiccated suprarenal in addition to thyroid gland. Baker calls attention to the occurrence of a severe form of anemia in cases of thyroid insufficiency and the possibility of rapid improvement on thyroid therapy. His observations led him to consider it more likely to occur in adolescents than in adults and to be characterized by a more marked decrease of hemoglobin than of the red cells.

A few months ago a paper by Warfield and Greene [13] appeared, describing cases of a chlorotic type of anemia associated with slightly lowered basal metabolic rates (from —10.5 to —18.5) and very little clinical evidence of hypothyroidism. In all except one of their patients, there was little or no diminution in the red cells but a considerable or marked lowering of the hemoglobin percentage. Several of their patients showed definite improvement, on thyroid therapy. The patient described by Baker and those of Warfield and Greene, except possibly Case 8 in their series, represent a somewhat different form of anemia from that which has been noted in the cases I have described. Their patients were young persons and had blood changes similar to the chlorotic type of anemia.

In Table 2 are shown the blood counts and basal metabolic rates of fourteen cases of hypothyroidism treated in the Presbyterian Hospital during the last six years. None of these had taken thyroid before the blood examination and basal metabolic rate determinations. The single patient with a red cell count below 4,000,000 was a boy with a pluriglandular picture having quite definite evidence of the Frölich syndrome in addition to thyroid insufficiency. The table serves to show that in the great majority of cases of hypothyroidism anemia is not a prominent feature.

Concerning the mechanism of hypothyroid anemia very little can be said. Possibly it is simply a manifestation of the effect on the bone marrow of the sluggish oxidation occurring in all the tissues. But if this were so, one would expect that a large percentage of cases presenting low basal metabolic rates would show a well marked anemia, and from Table 2 and numerous previous observations by others it is seen that this is not the case.

CONCLUSIONS

Two of three patients with hypothyroidism in whom an anemia was the most conspicuous clinical fact had no or very slight characteristics of myxedema, such as increase in weight, puffiness of the face and thickening of the skin, mental impairment, alteration in quality and quantity of hair and constipation. The most conspicuous symptom was weakness; sensitiveness to cold, decreased perspiration, paresthesia of the extremities, palpitation and dyspnea on slight exertion were also noted. The pallor of these patients may be characterized by a distinctly yellow tinge, particularly noticeable about the eyes and malar regions. One patient showed an absence of free hydrochloric acid in the gastric contents. The blood picture suggested primary anemia, but alteration in the size and form of the red cells was slight or entirely lacking in the patients observed, and there was no increase in the urobilin excretion. The basal metabolic rate before treatment was between —18 and —44. Treatment with thyroid gland was followed in one case by a prompt and complete recovery and in two others by marked improvement. From these three cases and from those reported by Warfield and Greene, it is clear that thyroid deficiency occasionally causes severe anemia resembling either chlorosis or primary anemia, without proclaiming itself by the usual signs and symptoms of myxedema.

41 East Seventieth Street.

TABLE 2.—*Blood Counts in Hypothyroidism*

Number	Age	Sex*	Basal Metabolism	Hemoglobin	Red Blood Cells	Index	White Blood Cells	Neutrophils	Basophils	Eosinophils	Lymphocytes	Monocytes
4	68	♀	—34	90	4,400,000	1.02	9,700	64	1	0	27	8
5	23	♂	—24	80	5,300,000	0.75	10,400	67	2	1	24	6
6	45	♂	—38	85	5,080,000	0.83	6,900	62	0	0	24	8
7	51	♂	—20	80	4,740,000	0.84	6,800	63	0	0	33	4
8	15	♀	—28	88	4,000,000	1.1	9,000	45	0	3	47	5
9	49	♀	—21	70	4,400,000	0.79	9,700	40	0	1	56	1
10	33	♀	—16	110	4,600,000	1.19	11,000	64	2	0	29	5
11	27	♀	—15	105	5,280,000	1.0	5,500	77	0	0	21	2
12	17	♀	—30	78	4,500,000	0.87	6,500	51	0	3	42	4
13	13	♂	—35	60	3,350,000	0.83	8,800	75	0	0	25	0
14	57	♀	—38	80	5,100,000	0.78	7,600	71	0	1	24	4
15	25	♀	—22	100	5,000,000	1.0	7,600	75	1	0	18	6
16	52	♀	—18	88	4,270,000	1.03	6,900	60	0	2	34	4
17	67	♂	—15	96	5,100,000	0.93	5,000	56	0	1	29	14

* In this column, ♂ indicates male; ♀, female.

Prostatic Obstruction.—The idea of burrowing a channel through the prostate in cases of obstruction to the outflow of urine is probably as old as the hills. . . . In 1834, Guthrie invented a catheter containing a concealed blade for dividing the bar at the neck of the bladder; and in 1876, Bottini of Pavia introduced his galvanocautery incisor with the aim of preventing hemorrhage.—Hammond, T. E.: *Brit. M. J.*

THE MANAGEMENT OF PERSISTENT OCCIPITOPOSTERIOR POSITION

BY USE OF THE KIELLAND FORCEPS OR MANUAL RECTIFICATION *

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Great diversity of practice and teaching exists among obstetric specialists in regard to occipitoposterior position in labor. This lack of uniformity in textbooks and handbooks on obstetrics and in papers in obstetric and medical journals may account in part for the unsatisfactory management of this cause of high maternal morbidity and fetal mortality in hospital and private practice.

There should be but one definition of persistent occipitoposterior position. It is the condition that results in skull presentation from the rotation of the occiput backward toward the sacrum. This occurs only when the head enters the pelvis with the occiput more or less posterior to the transverse diameter of the pelvis. The usual or normal anterior rotation of the occiput in all presentations, including the oblique posterior, may occur at any stage of descent, even before complete dilatation of the cervix; but when the occiput is more or less posterior at the inlet, rotation generally occurs or is completed about the time that the presenting part has reached the straits or plane of the ischial spines and when the dilated cervix is being pulled up over the head. If there is rotation neither forward nor backward at this stage, we call the condition a deep (transverse) arrest. If, on account of extension, the sinciput is lower than the occiput, it may be rotated anteriorly and the occiput posteriorly. A weak pelvic floor also favors this abnormal rotation or a deep arrest, and there are other factors which we need not consider at this time. What I wish to emphasize is that we cannot speak of a persistent occipitoposterior position until after the descending head has had the chance to rotate normally and has been prevented from doing so by obstacles not to be overcome, at least within a reasonable time.

It is true that cases have been reported in which the head has entered the pelvis with the occiput posterior. These are very rare and may be left out of consideration.

It may happen that the head enters the inlet with the occiput right or left posterior and meets with some hindrance to descent before it reaches the pelvic floor. Here we have dystocia due to failure in translation or descent. This might be called a high or inlet arrest, and the case should not be classed with cases of persistent occipitoposterior position or deep arrest. If indications for intervention arise from either the mother or the child, rules similar to cases of occiput right or left anterior position must govern. If forceps are applied, they should be high or inlet forceps and must be used at first as tractors. After the head is brought into the excavation, they may be used as rotators. For failure in descent, the Kielland forceps are the only reasonable kind to use, if the forceps operation is chosen. Like all high forceps, however, they are dangerous. In all kinds of inlet arrest, we have to make a difficult choice between high forceps and podalic version, pubiotomy and cesarean section.

It has been proposed, in these cases, to rotate the head and body by pushing the head above the inlet and rotating it with the hand in the uterus; then, inserting the hand still higher to grasp a shoulder and with the aid of the external hand rotate the trunk; and, finally, holding the head in a right or left anterior position, to apply the high forceps as well as possible to the head. This maneuver is better than the old method of applying the forceps to the sides of the pelvis with the occiput posterior, but it has been rendered unnecessary by the Kielland forceps, which can be applied to the head even in the inlet. Hence I would reaffirm the statement that in inlet arrest the choice of intervention, if such is absolutely necessary, is among high Kielland forceps, version, pubiotomy and cesarean section. The particular indication for each I do not consider germane to my strictly limited subject.

The frequency of the occurrence of persistent occipitoposterior position has been estimated very differently by different authors, from a fraction of 1 per cent to 8 or 10 per cent of all labors. Likewise, the primary inlet positions and the frequency of anterior or posterior rotation vary greatly according to different writers. The chief reason for this difference in the statistics of primary positions is that satisfactory internal examinations are not made at the beginning of labor. The position of the back can be determined with considerable accuracy by palpation and auscultation, but we cannot be certain that the position of the head as determined by the occiput is the same as that of the trunk as determined by the back. It is also difficult or impossible before some dilatation of the cervix to determine the landmarks of the fetal head through the rectum, and this is the only method of examination that would now be considered proper as a routine in a great number of cases. Hence there will always be considerable uncertainty regarding the primary positions and the frequency of rotation backward of the primary posterior positions.

Frequency of Inlet Positions at Beginning of Labor

Left occipito-anterior	55%	70%
Right occipito-anterior	15%	
Left occipitoposterior	10%	30%
Right occipitoposterior	20%	

From my own experience and from figures given by those who have made examinations early in labor, I have made the accompanying table, which, I believe, corresponds approximately with the facts. In this table I have included with the left occipito-anterior and right occipitoposterior positions the transverse left occipito and right occipito positions, respectively, agreeing with De Lee and others that the inlet transverse positions are not uncommon.

Of this 30 per cent of primary posterior oblique positions, about four fifths of the cases rotate anteriorly spontaneously, while in the remaining 6 per cent of all labors the rotation is posterior and remains persistently posterior. Of these, probably about 3 per cent are in women who have large pelves, who have very strong uterine contractions, or who have small children that are delivered spontaneously with occipitoposterior position causing no marked dystocia. The remaining 3 per cent require aid and form the cases to be considered in this paper.

Before the management of persistent occipitoposterior position is discussed; the mechanism of spontaneous

* Read before the Chicago Medical Society, Oct. 28, 1925.

labor in those cases that terminate without rotation should be reviewed. Here the head descends, through the straits into the obstetric outlet and is expelled from the vagina in one of two ways. If the extension of the head persists, the glabella impinges against the symphysis, which becomes the hypomochlion, and the occiput is pushed over the perineum when the brow and face pass from under the symphysis. If the occiput is pushed through the straits and comes to rest on the perineum in the obstetric outlet, while the sinciput remains stationary, a marked flexion occurs. Then the bregma rests against the symphysis, while the occiput is born over the perineum, and the sinciput, brow and face appear at the front. The latter mechanism is obviously much more favorable, as it allows the passage of the head through the vulva in the occipitobregmatic circumference, which is considerably less than the occipitofrontal circumference that must pass in the other mechanism. It is important to remember this, if we should attempt to extract with forceps a head in occipitoposterior position, in order that by proper manipulation we may flex the head and imitate the favorable spontaneous mechanism.

The chief danger in occipitoposterior position seems to lie in the failure to diagnose the condition. While a mistake may be pardoned when only external and rectal examinations are made, there is no excuse for a mistake when a vaginal examination is made and especially when intervention is attempted. If one is uncertain of the presenting part, on account of a large caput succedaneum, it is always possible to reach an ear, which will give a clear orientation.

The most striking finding in these cases while the head is in the excavation is its extension. In the center of the cervical os is the bregma or the sinciput. Later, when spontaneous labor is to occur and the head descends through the straits distending the perineum, flexion may take place, as has already been described; but these cases do not concern us as they do not belong to the 3 per cent that require intervention.

POSSIBILITY OF PREVENTING PERSISTENT OCCIPITOPOSTERIOR POSITION

Before proceeding to a discussion of the proper management of persistent occipitoposterior position, I should first consider the question whether there is any way to prevent this pathologic condition—any prophylactic treatment. Whatever will favor flexion of the head will favor rotation. It is a very old rule to have the patient lie on the side to which the occiput points. This can do no harm and may help a little. Another suggestion that has been made is to rotate the trunk by external manipulations, changing the back from a posterior position to an anterior. This attempt may also be made but, according to my experience, promises little and, like vain attempts at external version, may not be entirely harmless. During labor, in the stage of descent, any attempts at internal manipulations are not only useless but dangerous. The best rule for management in posterior oblique position is nonintervention until the head has reached the pelvic floor and the cervix has dilated. The descent will probably take no longer than in an anterior oblique position. Varnier found that labor was on an average two to three hours longer in the posterior oblique than in the anterior oblique position. This prolongation of labor is due to lengthening of the stage of rotation rather than to that of descent, complete dilatation of the cervix generally being necessary for the long rotation while not so important in the short rotation of anterior oblique position. Allowing, then, for this prolongation of labor, we support the patient with psychic help and if necessary with analgesia. Bill of Cleveland voices the opinion of those who contend that it is the function of obstetricians to save the patient from needless pain and exhaustion, and he advocates intervention as soon as the head reaches the pelvic floor and the cervix is dilated. To this rule there can be no great objection, provided we emphasize the need of *complete* dilatation. We all know from experience that many physicians call the cervix dilated when there still exists a rim an inch or more wide. The head should be out of the cervix for rotation; it should not be confined at all by a cervical band. If this stage has been reached and if good contractions for one or two hours fail to rotate, we are justified in intervening.

METHODS OF INTERVENTION

Of the various methods of intervention that have been proposed and used more or less for many years, we can now, I believe, eliminate all but two; namely, manual rotation and rotation and delivery by the Kielland forceps. Version with the head in the pelvis is absurd. Forceps applied with the pelvic curve to the front corresponding to the face of the child and used as tractors, pulling the head out with the occiput posterior, although recommended by some well known authors, are productive of serious unnecessary tears.

Occasionally it is possible to convert an occipitoposterior position into a face position by forceps with the pelvic curve directed forward. I believe that all these methods may be discarded in favor of those here advocated.

The other methods of intervention propose to rotate the head, bringing the occiput anterior. This may be done by the Scanzoni maneuver, which is still widely practiced and taught by some of our best authorities. I consider it a third choice. If this method is chosen for any reason, perhaps because of the failure of manual rotation and the lack of Kielland forceps at hand, it is important to remember two or three points in the technic. The forceps should be applied, as in nearly all cases of forceps application, in the mento-occipital diameter of the head. Then the handles should be raised to secure good flexion of the head, thus making the circumference of the head to be rotated as small as possible. At the same time the head may be pushed up slightly if it has become impacted in the pelvic straits. This motion will also help to release the shoulders, if they have descended sufficiently into the inlet to impede rotation. Then the handles of the forceps are swept around in the well known circle that allows the blades to turn on their own axis. During this procedure an assistant may try to help in rotating the trunk. It is desirable, as Bill has pointed out, to make the rotation complete until the sagittal suture is in the anteroposterior diameter of the pelvis. Then the forceps are removed and, if their use is necessary to extract, immediately reapplied to the head, as in the usual occiput anterior position.

MANUAL ROTATION

In probably three fourths of all cases of persistent occipitoposterior position, rotation can be made with the hand. Manual rotation should be attempted in all cases before resorting to forceps as rotators. The points to be emphasized in this maneuver are, first, that the head should be flexed as much as possible to reduce the circumference of the ball or cylinder to be

rotated; second, the rotation should be made within the excavation, not allowing the head to be pushed up out of the pelvis as is wrongly taught by some writers; and third, an attempt should be made to rotate the trunk and extremities. The actual procedure is as follows: The patient is given a few whiffs of gas, the hand antonymous to the original lateral position of the occiput, that is, the left hand, when the head entered the pelvis in the right occipito position, is introduced into the vagina and grasps the back of the head, the four fingers applied toward the posterior ear and the thumb toward the anterior ear. The occiput is then pulled down, while the entire head may be raised a little to disengage the shoulders if they have descended into the inlet. Sometimes it is best first to push up on the sinciput with the ends of the approximated fingers and thumb and later grasp the occiput. Then an effort is made to pull the occiput to the front and to push the sinciput to the rear. If we are successful in bringing the occiput in front of the transverse diameter, we hold it there until a pain comes and aids in further rotation. If there is a condition of uterine inertia, we may stimulate a contraction by the injection of 2 minims (0.12 cc.) of pituitary extract. The head must remain in place until rotation is complete and a few contractions have begun to adapt the head to its new position. If it is necessary to deliver the child immediately, we may apply forceps in the usual way after rotation is accomplished.

USE OF KIELLAND FORCEPS

When manual rotation succeeds, we have secured delivery with practically no risk to mother or child. Unfortunately, all must admit failure in some cases. Here the Kielland forceps can always be relied on and with less risk of injury than with other instrumental procedures. The main points in technic are as follows: The forceps are held in the position they will occupy in the pelvis, the short pelvic curve being directed toward the occiput. As the head should be grasped in the mento-occipital diameter, it will be necessary to direct the handle of the forceps rather far backward and to the right or left side, according to the lateral position of the occiput. Then the blades are introduced one after the other under the guidance of the respective hands inserted into the vagina at the side of the head. The posterior blade is introduced easily. The anterior blade requires more adjusting, but it is not necessary or desirable to use the technic advised for the high forceps; i. e., the introduction with the concavity forward and then rotation of the blade. The blades are adjusted so as to seize the head in the right diameter, and the handles are raised to flex the head and then rotated to bring the occiput into the anterior position. No traction is made, and sometimes at the beginning the head is pushed up a little. To assist in keeping the head flexed, it may be desirable to insert the fingers and press up on the sinciput. When the rotation is complete, the forceps are in position to make traction, and the head is delivered as with any other forceps.

SUMMARY

1. Persistent occipitoposterior position occurs only after the head has descended into the excavation. A primary occipitoposterior oblique position above, at the inlet or during descent is not abnormal, and rotation anteriorly occurs in 80 per cent of all such cases. No attempt should be made to rotate at this stage. If intervention becomes necessary, we may have to choose among a high forceps version, pubiotomy or cesarean section. If a high forceps is selected, the Kielland forceps is the best instrument to use, but it is used first as a tractor, and not until the pelvic floor is reached is rotation attempted. This problem of aiding descent, however, is quite different from that of managing occipitoposterior rotation and should not be confused with the latter. Premature intervention with spontaneous descent in either the occiput oblique posterior or anterior position is to be deprecated, for all high forceps operations are the most serious of obstetric operations.

2. After descent, complete dilatation of the cervix is generally necessary for the long or anterior rotation. Hence artificial rotation should not be attempted until this is secured.

3. In persistent occipitoposterior rotation, as well as in persistent deep transverse arrest, we should first attempt manual rotation, remembering that changing the extension attitude into a flexion is always of the first importance.

4. In case of failure with manual rotation, the Kielland forceps should be applied with their pelvic curve toward the occiput and in the long occipitomental diameter. Then the head should be flexed and rotated, after which the head is delivered in the usual way.

5. If manual rotation fails and no Kielland forceps are at hand, we may use a Naegele or Simpson forceps in the Scanzoni maneuver, remembering, however, to apply them in the occipitomental diameter and to flex the head before rotating.

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SIMULTANEOUS CHOLECYSTOGRAPHY AND TESTS OF HEPATIC AND RENAL FUNCTIONS

BY A SINGLE NEW SUBSTANCE, SODIUM PHENOLTETRAIODOPHTHALEIN: PRELIMINARY REPORT *

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WARREN H. COLE, M.D.; GLOVER H. COPHER, M.D.
AND
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Since the beginning of our work on cholecystography,[1] an effort has been made to find a substance which would not only prove practical for visualizing the gallbladder but which would also give sufficient color to the blood serum to permit the use of it for a test of hepatic function, in a manner similar to the test devised by Rosenthal[2] with the use of phenoltetrachlorphthalein. It will be recalled that Rosenthal improved the previous method of use of this substance by noting the amount of the dye retained in the serum after given periods instead of the amount which passed into the stools. His principle, therefore, was to estimate the hepatic function by determining the amount of dye that failed to pass through the liver in a given time instead of by determining the amount that actually passed through.

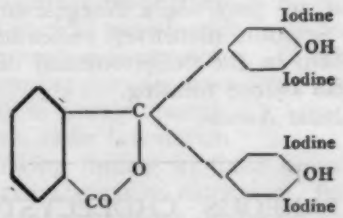
* Aided by a grant from Edward Mallinckrodt, Jr.

* From the Departments of Surgery and Radiology, Washington University School of Medicine and Barnes Hospital.

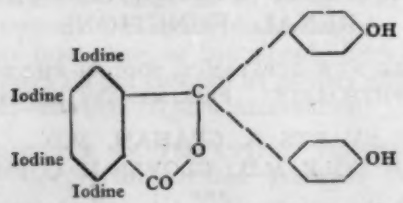
1. Graham, E. A., and Cole, W. H.: Roentgenologic Examination of the Gallbladder: Preliminary Report of a New Method Utilizing the Intravenous Injection of Tetrabromphenolphthalein, J. A. M. A. 82: 613 (Feb. 23) 1924.

2. Rosenthal, S. M.: An Improved Method for Using Phenoltetrachlorphthalein as a Liver Function Test, J. Pharmacol. & Exper. Therap. 19: 385-391 (June) 1922.

After we found that cholecystography was a practical procedure when we used salts of various phenolphthaleins containing bromine or iodine atoms, it seemed logical to make attempts to determine also if these substances could be used for tests of hepatic function by estimating colorimetrically their amounts retained in the blood after alkalizing the serum. The substances, however, which we have used chiefly for cholecystography have been tetra-iodophenolphthalein and tetrabromphenolphthalein. These substances do not stain the serum sufficiently to be easily recognizable in it even after alkalization. This fact is in conformity with the general rule that in this group of substances the intensity of color of the dye depends largely on the location of the halogen atoms. There are two isomeric groups of halogenated phenolphthaleins; in one group the halogen is attached to the phthalein part of the molecule, and in the other group it is attached to the phenol ring. The former group of isomers possesses the more intense color. It was the recognition of this fact that led Abel and Rowntree [3] and the other early workers with the use of dyes as functional tests to use phenoltetrachlorphthalein instead of its isomer, tetrachlorphenolphthalein. Herewith are given the structural formulas of the two isomeric iodine compounds.



Structural formula of tetra-iodophenolphthalein.



Structural formula of phenoltetra-iodophthalein.

It was only natural, therefore, after finding that tetra-iodophenolphthalein was a safe and practical agent for rendering the gallbladder visible, that we should turn to its isomer, phenoltetra-iodophthalein, as a substance which might make possible the simultaneous performance of a test of hepatic function and cholecystography.

In an article published last September,[4] we reported that good cholecystograms could be obtained with this substance. Unexpected difficulty, however, was encountered in the preparation of this substance in satisfactory quantity, and this has delayed the progress of the investigations of it as a means of testing hepatic function.[5] We are now prepared to state, however, that the sodium salt of phenoltetra-iodophthalein not only makes possible the visualization of the gallbladder apparently as well as its isomer, sodium tetra-iodophenolphthalein, but it also stains the serum sufficiently to enable its detection after alkalization. Probably the same principles of technic can be applied to its quantitative recognition and to the evaluation of the results as are used in the Rosenthal test. The color obtained, however, is slightly more purple than that due to phenoltetrachlorphthalein.

Roentgenograms of the gallbladder of maximum intensity have been obtained within four hours in normal subjects after intravenous injection of 0.055 Gm. per kilogram of body weight. No general toxic reactions have occurred so far in any of the patients who have been injected, but there has been a slightly greater tendency to venous thrombosis at the site of injection, although apparently this complication can be obviated by washing out the vein with physiologic sodium chloride solution immediately after the injection. We do not feel that we yet have sufficient knowledge to recommend the use of this substance as a substitute for sodium tetra-iodophenolphthalein for cholecystography, and we are presenting this information only as a preliminary report. It is possible, however, that further work with it will show that because of possibly faster excretion through the liver, it will shorten the time now required for a cholecystographic examination by the use of sodium tetra-iodophenolphthalein. It may also be possible to secure equally good cholecystograms with much smaller doses of this substance and thereby to eliminate practically all toxic symptoms.

We have not yet tried giving it to patients by mouth because we have not yet been able to obtain enough of it to carry out any more than preliminary observations. It seems reasonable to expect, however, that this substance would prove just as satisfactory for oral administration as sodium tetra-iodophenolphthalein. It is, of course, not yet certain what advantage there may be to the fact that, by means of sodium phenoltetra-iodophthalein, hepatic functional tests can be performed in addition to cholecystography. The ultimate appraisal of the value of tests of hepatic function based on the excretion of dyes by the liver seems uncertain in view of the conflicting literature. Another feature of sodium phenoltetra-iodophthalein is that, in addition to being excreted in sufficient amount through the liver to give excellent cholecystograms, it is also excreted sufficiently through the kidneys to enable its recognition colorimetrically in the urine after alkalization. Thus, it seems probable that by the use of a single dose of this substance simultaneous observations can be made of the renal function, of the hepatic function and of the condition of the gallbladder, a combination of observations which hitherto has been impossible with a single substance.

3. Abel and Rowntree: On the Pharmacological Action of Some Phthaleins and Their Derivatives with Special Reference to their Behavior as Purgatives, I, J. Pharmacol. & Exper. Therap. 1: 231, 1910.

4. Graham, E. A.; Cole, W. H.; Moore, Sherwood; and Copher, G. H.: Cholecystography: Oral Administration of Sodium Tetra-Iodophenolphthalein, J. A. M. A. 85: 953-955 (Sept. 26) 1925.

5. The sodium salt of phenoltetra-iodophthalein which we have used in this work was prepared for us by the Mallinckrodt Chemical Works of St. Louis.

Hysteria.—In general, one may say that puberty is the favorite soil for hysterical reactions and infantilistic inhibitions of development; and, especially with the persistence of early pubertal psychic stigmas, most easily give, in addition to the severer psychic defect forms, the nucleus for many "hysterical characters," i. e., for personalities with constant inclination to hysterical reactions. Hysteria is above all a reaction-form "of naive ,undeveloped psychic life" (Kraepelin) of a strongly instinctive, impulsive structure. In the degree that a person separates himself from a primitive condition, or from a youthful age, does hysteria receive the exclusive character of a severe pathologic abnormality on the basis of degeneration; and even this only when an extremely severe experience is not to be considered.—Kretschem, Ernst: Hysteria.

FACTORS INFLUENCING APPENDICITIS MORTALITY

RESULTS IN ELEVEN THOUSAND FOUR HUNDRED CASES

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The possible reasons for the present recorded mortality resulting from appendical infections and inflammations and their surgical treatment merit continued discussion and study. There is pressing need for the observance of pertinent factors that have a definite bearing on the end-result and the mortality that is encountered. There is an apparent laxity, nearly bordering on indifference, as to our attitude toward this surgical entity. Ochsner, whose name will ever be associated with appendicitis, in one of his last discussions of this disease and its treatment, remarked that nowadays almost any one attempted to perform an appendectomy, and if the disease was in its early stage, with the aid of modern surgical asepsis, his surgery resulted in a recovery. Ochsner further said that when one is confronted with the complications that do occur, when the condition is more than a simple inflammation, then the end-result and a low or a high mortality are dependent on the judgment, experience and skill of the operating surgeon. That is apparently the crux of our appendicitis mortality today—the judgment, experience and skill of the surgeon.

Judgment, skill and experience result only as one encounters with reasonable frequency the various types of appendical involvements. Those qualifications will even then be but mediocre in degree unless the surgeon pauses from time to time and subjects his experiences to a hypercritical censoring and the formulation of deductions that shall create principles that govern his work for the purpose of avoiding the errors that make for increased mortality or complicated recoveries. We need to check up on ourselves from time to time and, having done so, we must compare our work with that which is reported from other surgeons and other hospitals. That is the justification for articles such as this, for thereby there is made available, if a sufficient number of similar studies are made by other surgeons, comparative figures and factors that will create acceptable standards for appraisals.

The deductions contained herein are based on 227 cases of appendicitis, which are added to 100 cases previously reported on and which impart the results of personal contact and surgical care of the patients. The condensed statistics of the 327 cases are given in table 1.

Recognizing from reports encountered that in certain localities, in fact, in many communities and hospitals that were not connected with colleges or clinics wherein there had been established teams of trained assistants, that the mortality rates exceeded by 2 and 3 per cent the customary quoted one, I undertook to collect the reports of a number of hospitals in several states as well as in our own state and secured the replies given in table 2.

SUMMARY

1. The apparent average mortality in acute appendicitis is 4.23 per cent.

2. The average operative mortality for removal of a chronically inflamed appendix is 1.68 per cent.

3. These figures are based on reports from thirty-five hospitals located in eight states, reporting 11,400 cases of appendicitis.

CONCLUSIONS

The question now becomes pertinent: On what does mortality depend and what are the outstanding factors that have potential bearing on it? Personal experience causes the formulation of the following conclusions:

Diagnosis.—The making of an early diagnosis and bringing the patient to early operation are of primal importance. Diagnosis that is made late is not, I admit, always chargeable against the physician, for quite frequently medical advice is not obtained until some hours or days have elapsed since the onset of the attack. On the other hand, there are too many instances wherein we have been careless and have not properly examined the patient, and it is not uncommon to find that the patient's condition is not suspected as one of acute appendicitis until a second or third visit is made.

Likewise there are some who withhold a diagnosis because the symptoms are not always the classic ones. Pain, followed by nausea or vomiting, is present in every case, but the degree of pain and the amount of nausea or vomiting are not always distinctly prominent. In some cases we have seen a total absence of vomiting and only a mild nausea and have encountered at operation a gangrenous appendix. Muscular rigidity is likewise not always pronounced, and so too is the exact location of the pain not always found directly over McBurney's point. They vary in degree and in locality and at times are very indefinite. Temperature and pulse may be normal, and a very markedly involved appendix will be disclosed. When temperature and pulse give rise to alarm, the local condition is one that has become far advanced. We have long since ceased to be influenced because there was no temperature elevation, or only a fraction of a degree, and because the pulse bordered on the normal. It is quite the rule, however, that a normal, or 99, temperature will be associated with a pulse that is from 85 to 100 or even higher in rate and does aid in forming a diagnosis. Still, these are not important influencing factors in making the diagnosis or refuting the other symptoms.

The white count with the differential may give us valuable aid at times and, again, may be misleading, so that absolute reliance cannot be placed on it. A white count of 8,000 has been frequently noticed in the gan-

TABLE 1.—*Results of Personal Contact and Surgical Care in Three Hundred and Twenty-Seven Cases of Appendicitis*

Acute cases		129		
Adults (over 15 years)	111			
Children (under 15 years)	18			
Appendix removed at laparotomy		98		
Total		227		
Acute appendicitis (nonpurulent stage)		90		
Subacute (operated on as acute)		11		
Gangrenous		10		
Ruptured		10		
Abscess		8		
Nondrainage	96			
Drained	33			
Appendix involved and removed at operation for other abdominal pathologic changes		98		
Operations:				
Salpingectomy	16		Ectopic pregnancy	1
Hysterectomy	15		Oophorectomy	17
Gastro-enterostomy	6		Cholecystectomy	8
Uterine suspension	17		Ovarian cyst	3
Hernia	3			
Nephrectomy	1		Mortality, acute	0.007
Uterine myomectomy	3		Mortality, both	0.004

grenous and perforated appendixes, while on the other hand a count of from 14,000 to 20,000 has been a not uncommon experience in acute catarrhal conditions, without suppuration. A white count should always be made, but a positive conclusion should never be withheld or made because of these findings. The differential polymorphonuclear count will be found of value in determining the patient's resistance to the infection. A white count over 20,000 or 30,000 should awaken a suspicion, and care should be taken definitely to rule out chest and kidney involvement.

With confirmatory symptoms well established, a urinalysis that reveals the presence of bile has led us to note that it frequently accompanies a marked suppurative or gangrenous infection of the appendix, and it has now become our tendency so to express ourselves when such a finding is reported by the laboratory.

Many and varied diagnostic factors may be encountered, and at times one is quite in doubt as to their portent or value; it is only by a careful review of their relationship to other prominent symptoms and the recalling of similar encounters in one's experience that proper appraisal can be evaluated. Keen alertness will obviate pitfalls and personal chagrin and will contribute to avoidances of errors. It is therefore meriting reiteration that concentrated efforts toward early and accurate diagnosis will materially reduce our mortality.

Operative Technic.—Much has been written and a large variety of recommendations have been advanced as to the site of incision. This can be determined only by the individual operator, and no one type can be advanced as being the incision *par excellence*. I do not feel that the site of the incision is of such great significance, for the important point is ample exposure

TABLE 2.—*Mortality in Eleven Thousand Four Hundred Cases of Appendicitis, Reported by Thirty-Five Hospitals*

Hospital	Location	Acute	Deaths: Number	Deaths: Per Cent	Surgeons	Chronic	Operation	Deaths	Total
Lakewood	Petoskey, Mich.	9	1	11.1	5	25	24	0	33
Presbyterian	Chicago	149	3	2.0	15	108	101	0	250
Mercy	Bay City, Mich.	210	7	3.3	8	152	152	4	362
Providence	Detroit	320	47	12.65	25	694	450	13	840
Mercy	Iowa City	635	20	3.1	10	287	250	9	885
St. Anthony	Columbus, Ohio	18	1	5.5	2	17	17	0	35
Mercy	Jackson, Mich.	96	3	3.1	24	32	31	0	127
St. Joseph	Sioux City, Iowa	488	7	1.4	5	125	111	0	599
University of Michigan	Ann Arbor, Mich.	96	1	1.04	10	241	92	1	188
Nichols	Battle Creek, Mich.	72	3	4.1	7	52	50	2	122
Mercy	Muskegon, Mich.	1,035	..	1.6	11	345	345	?	1,380
St. Mary's	Saginaw, Mich.	65	24	34.4	10	72	72	15	137
Alleghany General	Pittsburgh	119	6	5.04	8	359	315	8	434
Ford	Detroit	72	5	6.9	..	587	389	15	461
Akron City	Akron, Ohio	107	6	5.5	21	98	85	0	192
St. Mary's	Marquette, Mich.	29	2	6.8	9	31	25	1	54
Harper	Detroit	633	..	....	..	1,516	1,516	..	2,149
St. Luke's	Marquette, Mich.	68	3	4.4	7	11	10	1	78
Jamestown General	Jamestown, N. Y.	81	2	2.4	20	33	33	1	114
Sparrow	Lansing, Mich.	261	11	4.2	36	185	185	4	446
Lakeside	Cleveland	74	4	5.4	21	294	282	8	356
Hurley	Flint, Mich.	195	12	6.2	32	...	...	..	195
Butterworth	Grand Rapids, Mich.	188	5	2.6	..	171	0	0	359
St. Joseph	St. Paul	125	3	1.6	..	151	133	0	258
St. Luke's	St. Paul	81	4	4.9	30	42	42	0	123
Norton	Louisville, Ky.	70	4	5.7	12	106	101	1	171
St. Luke's	Duluth, Minn.	182	10	5.4	30	240	230	3	412
Immanuel	Mankato, Minn.	47	3	6.3	11	59	59	0	106
Bethany	Kansas City, Kan.	216	13	6.01	20	356	254	6	570
St. Mary's	Minneapolis	236	9	3.3	35	452	442	0	708
Louisville Public	Louisville, Ky.	58	3	14.3	13	44	33	3	91
St. Francis	Wichita, Kan.	132	1	0.71	9	111	110	0	243
Augustana	Chicago	86	3	1.05	11	111	105	..	191
St. Margaret's	Kansas City, Kan.	46	2	4.7	7	38	36	0	82
		6,369	243			7,225	6,180	96	

Acute cases, 6,369, less Harper Hospital, 633	5,736	Mortality (acute) in 5,736 cases	4.23%
Deaths	243	Mortality (chronic) in 5,664 cases	1.68%
Chronic cases, 6,185, less Harper Hospital, 1,516	5,664	Mortality (acute and chronic) in 11,400 cases	2.9 %
Deaths	95		

In infancy and in childhood the diagnosis calls for the uttermost acumen. Exactness and alertness in differentiation should be exercised, and a careful study and analysis of the history, onset, symptoms and signs should be made. Appendicitis is often mistaken for some minor condition in a child. The disease is rare in the first two years of life, but with a mortality of 50 per cent in a series of eighty cases reported by Abt, one is forewarned to exercise painstaking diligence to arrive at the proper diagnosis and thereby conserve valuable time as well as to minimize the mortality. Especial attention must be given to eliminate the abdominal prodromes of infectious diseases and not hastily to conclude that the abdominal symptoms are merely ushering in an acute disease of infectious nature. Appendicitis in children is insidious in its onset, and the tendency is toward rapid perforation. Indications of a coexisting peritonitis can properly be assumed as originating from the appendix involvement.

so as to permit our dealing with the intra-abdominal condition as the findings indicate. I find that I am using most frequently the oblique right rectus route. The peritoneum opened, the presenting intestines are carefully and completely blocked off with moist saline packs. Invariably the appendix is removed. To do so requires only a few moments; still, one must not attempt it if conditions bring about excessive manipulations in the presence of an abscess or the breaking down of inflammatory defenses.

The treatment of the stump is a minor subject for debate or differences of opinions, as is also its phenolization. A purse string, ligation and invagination have been my plans, and I have yet to find a reason for altering them. The bringing over of the cut end of the meso-appendix prevents possible bands of adhesions, which are, as a rule, of only passing moment. Closure by étage suture with or without tension sutures proves most satisfactory.

It is, however, when we are confronted with the retrocecal, suppurative abscess, gangrenous and buried in adhesions type, with or without walling-off appendicitis, that the surgeon is called on to exercise his judgment and experience and to exhibit a refined effective technic. One cannot set these forth in mere words, for individual cases, conditions and complications prohibit hard and fixed rules of procedure. The generalities are mobilization, definite progressive steps, with the avoidance of undue handling or mauling of the cecum or ileum, with gentleness of touch and expeditiousness in so doing.

Drainage should be drainage and not merely the insertion of a tube, gauze or rubber strip without regard to their location. The cigaret, rubber tube or rubber dam will accomplish the desired results, provided they have been so placed as to drain the dependent sites. When drainage is indicated then one should drain, but one should not nullify it by suturing the incision so tightly as to seal the outlet. More deaths occur from faulty draining than from almost any other cause. Frequently it is quite indicated not to suture the wound at all. If it is sutured part way, then care must be taken that the suture extends only part way and does not occlude the drainage openings. It is better by far to err on the side of nonsuture than to suture tightly, for a ventral hernia is far easier to repair than to combat generalized peritonitis or give life to a deceased patient.

Postoperative Care.—In the ordinary acute case without drainage, the postoperative course should be without untoward symptoms. Ordinary postoperative care is as a rule all sufficient. The patients are permitted to have a back rest on the third day, to be out of bed on the sixth day and home at the end of a week.

It is in the cases in which drainage has been done, and those showing moderate or somewhat advanced peritonitis, that aggressive postoperative care will circumvent a fatality. Splinting the abdomen with morphine given so that the patient is quite stuporous is a very effective combating measure. The giving of plenty of fluids is most important. From 2,000 to 3,000 cc. of saline solution given subcutaneously while the patient is still on the table, and this repeated in twelve hours, together with a continuous rectal drip, is clearly indicated. One, two or even more intravenous blood transfusions are of material value in combating the infection and building up resistance. Vomiting is controlled by early and repeated gastric lavage. Drug stimulation is of little value unless digitalis is given because of myocardial symptoms. The patient's position should be changed from back to right side frequently.

The drains should not be tampered with. The outside dressings may be changed, but the drains must remain in place until convalescence is well established. They are not to be removed until they are almost ready to float out of themselves. One defeats their purpose if removal is attempted in two, three or four days, in spite of the arguments that nature has in that time walled off the rest of the abdomen. The early removal of drains is a factor that increases our mortality.

Massive Collapse of Lungs.—Probably the reason massive collapse of the lungs is so frequently overlooked is that its mere presence is at once regarded as conclusive evidence of the existence of pneumonic consolidation. Due regard to the other signs, particularly cardiac displacement, should make the diagnosis clear.—Walter Estell Lee.

END-RESULTS OF RADIUM TREATMENT OF SKIN CANCER*

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Literature on cancer contains numerous articles on the treatment of isolated cases of skin cancer with radium but few statistics on the results of large numbers of cases. In the handbook recently published by the American Society for the Control of Cancer [1] is found the statement that there are few statistics on the results of treatment of any sort.

In observing cases of skin cancer treated with radium, one notes the rapidity with which the average case responds. The impression is gained that treatment by radium is usually successful. In order to see whether or not we were justified in such impressions, it seemed wise to take account of stock by reviewing a group of cases. All patients with skin cancer entering the Huntington Hospital during the years 1917 and 1918 and treated with radium were studied for end-results. There are 265 cases in the series.

It must be appreciated that in a clinic such as the one at the Huntington Hospital one sees all types of cancer of the skin from a keratosis becoming cancerous to an extensive cancer involving the deep structures. In many of the advanced cases the lesions have been neglected by the patients themselves; others have been incompletely or incorrectly treated by the physicians whom they consulted. Still others have been correctly treated but have not responded to treatment. These cases are sent to us because of the fact that we have had greater experience with such cases.

Furthermore, it must be appreciated that the majority of these patients are old. The average age of the 265 patients in this series was 60.8 years; 144 were over 60. Many of the patients come from rural New England. For these reasons, regular trips to the hospital are a hardship. As a rule these patients come regularly until the gross lesion is destroyed, but it is more difficult to get them to come for careful watching afterward. It was intended to secure five year end-results on this series, but the number who died of intercurrent disease or who were untraced between the three and the five year period was great enough to reduce the number available for end-results nearly one half. Seventy-eight cases were followed for a full five years or more. There was one case of recurrence at the end of four and one after five years, so that it is apparent that three year statistics are as good as five year on this type of disease. Patients who were treated early and cured quickly did not consider their troubles serious enough to warrant continuing visits or answering follow-up letters for three years, and they were frequently lost. With a good follow-up system, and with the aid of the state bureau of vital statistics, it is easier to trace a dead patient than a cured one.

SEX

There was a slight preponderance of men over women, the ratio being about 6 to 4. The statement has been made frequently that from 75 to 90 per cent. of all cases are found in men. Krompecher,[2] however, found 9 in men to 8 in women, and Hazen [3] records about 5 to 4 ratio.

* From the Collis P. Huntington Hospital.

1. Essential Facts About Cancer, American Society for the Control of Cancer, 1924.
2. Krompecher: Der Basalzellenkrebs, Jena, 1903, cited by Hazen (Footnote 3).
3. Hazen, H. H.: Skin Cancer, St. Louis, C. V. Mosby Company, 1916.

OCCUPATION

Another prevalent idea which these figures seem to refute is the one that skin cancer is more likely to appear among people living outdoors and thus exposed to the elements. "Essential Facts about Cancer" [1] states that skin cancer is found "especially in those who have long followed outdoor occupations." Not one of our 111 women had engaged in outdoor occupations and scarcely more than half of the men. Of the entire series only 29 per cent. worked outdoors. The Huntington Clinic draws many of its patients from the country about Boston, so that this series does not contain too great a proportion of indoor workers. Therefore, we must conclude that occupations, indoor or outdoor, have little to do with the prevalence of skin cancer.

TABLE 1.—*Age Range in Two Hundred and Sixty-Four Patients* *

Age in Years	Number of Cases
19	1
20 to 29	0
30 to 39	10
40 to 49	36
50 to 59	78
60 to 69	70
70 to 79	60
80 to 89	14

* Average age, 60.8 years.

PREVIOUS TREATMENT

It is futile to catalogue the kinds of treatment to which these patients had been subjected before coming to the hospital. The statement of a patient that a lesion has been cauterized means nothing unless one knows whether this was done with an actual cautery to the lesion and surrounding tissues, or whether the surface was touched up with a caustic pencil. Every type of treatment known to man had been given: among them, excision, incision and drainage (through incorrect diagnosis), radium, roentgen ray, "electricity," ointments, washes, nitric acid, caustics, cancer pastes, carbon dioxid snow, phenol (carbolic acid), ozone, iodin and violet ray. Other patients, not seeking professional advice, had applied such home remedies as sulphur, pork fat, fullers' earth, hydrogen peroxid, sulphonaphthol, petrolatum, powder and herb teas.

DURATION

Statements made by patients as to the duration of a lesion are inaccurate. Bloodgood [4] has stated that he believes that every one of these skin cancers has an antecedent benign lesion. The average patient recalls having some minor defect in the skin for many years, and he is not conscious when it began to change its character. These precancerous lesions may have been seborrheic warts, moles, papillomas or keratoses and may have existed for years. Some of our patients had been under treatment in other clinics for a recognized skin cancer for periods long enough to justify our belief that many of these lesions had been malignant for three or five years before we saw them.

PATHOLOGIC EXAMINATION

Except when there is reasonable doubt as to the diagnosis, we do not consider it good therapy to remove specimens for diagnosis. Because of the danger of metastasis, we never curet these lesions. Wassermann tests are made only in the doubtful cases. Clinical examination of the average skin cancer by a physician seeing many of them, checked up by microscopic examination of those removed surgically, is believed to be accurate enough to forego removal of a specimen. The presence of induration about the periphery of a pearly edged, ulcerated or scabbed skin lesion makes the diagnosis practically certain. In borderline cases, the presence of true induration is the deciding factor.

We have fund it difficult to differentiate clinically between basal cell cancer and squamous cell cancer. During the same two year period, twelve skin cancers were removed surgically and examined by the pathologist. Frequently the pathologic examination did not coincide with the diagnosis made clinically as to type. However, the methods of treatment are the same whatever the type.

Specimens were removed from twenty-four of the patients in this series—patients who were not responding well to irradiation, or those who had been suffering from the disease for many years. In seven the specimen showed squamous cell or epidermoid carcinoma, and in seventeen, basal cell carcinoma.

Basal cell carcinoma does not metastasize. It is a low grade, slow growing type. These seventeen patients had had the disease over seven years, on the average, before coming to us. In our clinic they averaged four and a half years under treatment. Several are alive with the disease. There was but one cure, and that was an operative cure after radium had failed. It is interesting to note that all but one of these seventeen patients had undergone at least one operation, and but one was cured. Some of the operations preceded irradiation, others followed it, while still others were done with immediate radium treatment.

The seven patients with proved squamous cell carcinoma belong in a different class. Their average duration of illness was only three years before treatment. They averaged one year under treatment, with one cure by operation. One other operation was done.

An attempt was made to classify these squamous cell specimens according to the amount of differentiation of the growths, as described by McCarthy and Broders [5] of the Mayo Clinic. There were too few cases to give any satisfactory results in determining the malignancy of these growths in this way, but the results were interesting in three or four cases. In these there was practically no differentiation of the cells; the disease spread rapidly and was not influenced by treatment. Those showing considerable differentiation grew less rapidly.

TABLE 2.—*Sex and Occupation*

Sex	Occupation			Total
	Outdoor	Indoor	Unknown	
Male	75	67	7	149
Female	0	111	5	116
Total	75	178	12	265

There were two proved cases of glandular metastases, both of the squamous cell type. There were four other patients dying of glandular involvement, from whom no specimens were obtained.

TECHNIC OF RADIUM TREATMENT

Previous to the year 1917, radium treatment of skin cancer at the Huntington Hospital was in an experimental stage. Various types of filters, various dosages,

4. Bloodgood: Progressive Medicine, December, 1912, cited by Hazen (Footnote 3).

5. McCarthy and Broders: Ann. Surg. 76:9 (July) 1922; abstr., J. A. M. A. 79:850 (Sept. 2) 1922.

and several different intervals between treatments were tried. At first, patients were seen and frequently treated every week, but later the time interval was changed to two weeks. Finally, it was found best to give a maximum dose at one sitting, and the patient was asked to return in three weeks. By this time they had received the maximum benefit from the treatment and repair had set in. If there was still reaction from the first application, treatment was postponed for another two or three weeks. Certain modifications have been made in the technic since 1917, but in general the methods in use now are the same.

Fig. 1.—Carcinoma of the forehead of six years' duration, 8 by 5 cm.

Radium emanation has been used exclusively. The emanation is pumped into capillary glass tubes, which are sealed off, about 1 cm. in length. These tubes are then placed in jackets of steel about 0.25 mm. thick. Into one end of the jacket is screwed a small point and into the other a head which bears a letter identifying the tube. This makes a needle about 2.8 cm. in length.

The type of treatment given varies with the size and location of the lesion. For a round lesion it is best to use an applicator that will keep the radiation within a circular area. Bovie and Daland [6] showed that a brass cone, 1 cm. high, on which a tube of emanation was laid, gave not an oval reaction but a round one. These experiments were carried out by irradiating known thicknesses of photographic paper, developing them and making models of the irradiated portions of the paper. The smaller the aperture in the cone next to the skin, the more intense the irradiation, a fact that must be borne in mind. The objection to this method is that, if ulceration of the lesion or the skin around it occurs, the final result shows a definite line between the irradiated and the nonirradiated tissues. If no ulceration occurs, it is a satisfactory method. For lesions that are not circular, an oval reaction is desired. To obtain this, a centimeter of gauze or wood may be used as a filter. This allows the radiation to spread out around the periphery, and does not give a definite line of demarcation. However, because the radiation does spread out, a heavier treatment must be given. Because of the law of inverse squares, the dosage required when a centimeter of gauze, wood or air (cone) is used for a filter is about four times that required when the tube is placed directly on the lesion. The amount of tissue effectively irradiated by such an application is about 4 sq. cm. There are fewer peripheral recurrences when this type of treatment is given.

6. Bovie, W. T., and Daland, G. A., unpublished experiments.

When a direct application of the tube to the tissue is made, more beta radiation is secured. We believe that this is to be desired. Our tendency has been more and more to use this method in preference to the brass cone or wood filter. When an effective dosage is given, there will be necrosis of the tissue beneath the tube for a distance of 0.5 cm. in each direction. The gamma radiation will probably extend twice as far and will cause some damage to tissue, but not necrosis. If the lesion to be treated is superficial, such an application would leave a depressed linear scar and should not be used. In such a case the tube may be laid on a few millimeters of gauze or on a thickness of a throat stick. This allows the maximum point of treatment to come within the lesion and not in the healthy underlying tissue.

Whenever the tube as applied to a lesion comes within 1 cm. of normal tissue, the latter must be protected by 2 mm. of lead. This may be done by laying a curved piece of lead over the tube or by laying the lead over the part to be protected. The lead should be covered with rubber or adhesive plaster to prevent secondary radiation. Such protection is necessary for treatment around the eye, on the side of the nose or on the ear.

DOSAGE

It has been found that, when a steel jacketed emanation tube (0.25 mm. steel) is used for a surface application, a dosage of 12.5 millicurie hours is sufficient to give an erythema and produce slow disappearance of a skin cancer. Fifteen millicurie hours produces a definite destruction and is generally used at the first treatment.

The *easiest* way to apply tubes to a lesion is by fastening them with a narrow strip of adhesive plaster. This requires too close contact of the fingers to the radium. A *better* method is to apply a little firm white petrolatum from a tube directly to the lesion. With long forceps the radium may then be applied where desired. A little absorbent cotton can be similarly applied over the tube and stuck to the petrolatum.

Fig. 2.—Patient in Figure 1 after twelve radium treatments with bare steel tubes. Two small recurrences developed but were destroyed by radium. Well two years after treatment of recurrences.

Usually this is sufficient to hold the tube in place. If desired, adhesive plaster may be applied over all with an instrument. Dental wax moulds for placing and holding the tubes have been tried, but they were not as satisfactory as the foregoing method.

The reaction from such a treatment begins in about five days as an itching sensation. This is followed immediately by an erythema and finally, at the end of ten days, by an ulceration. At the end of two weeks

repair sets in, the symptoms disappear, the lesion disappears and healing begins. At the end of three weeks, rarely as long as four or five, the reaction entirely ceases.

TABLE 3.—*Results by Classes*

	Class A	Class B	Class C	Total
Total number of cases (two years)	183	53	29	265
Inconclusive cases	2	3	1	6
Untraced for full three years.	21	7	0	28
Died of intercurrent disease within three years	22	6	0	28
Cases available for end-result data	138	39	28	203
Radium cases (well three years)	112 (81%)	15 (38.4%)	0 (0%)	127 (62.5%)
Radium and operation (well three years)	4 (3%)	4 (10%)	1 (3%)	9 (4.4%)
Total (well three years)	116 (84%)	19 (48.4%)	1 (3%)	136 (66.9%)
Died of cancer	9	17	24	50 (24.6%)

In times past we have treated some of the nonulcerated lesions or portions of lesions with 1 mm. or 0.5 mm. silver filtered applicators which screen all but the gamma radiation, and with a larger amount of radium. We are firmly convinced that this is temporizing, for in order to destroy cancer beta radiation is applied too near normal tissue, there will be either a depressed scar or a smooth surface made up mostly of scar tissue.

We realize that the use of ointments, such as petrolatum or boric acid ointment, is thought to increase the effect of the irradiation. Nevertheless, the dressing that we advise patients to use is a small piece of linen to the under side of which an ointment has been applied. No adhesive plaster is required, and it is an easy dressing for the patient to use. We have used this type of dressing so constantly that our dosage has been determined with the expectation that ointment would be used.

CONTRAINDICATIONS

We have found that wherever there is a possibility of necrosis of cartilage from irradiation, excision should be done. This applies chiefly to the ears, although to a lesser extent to the upper lids and nose. Necrotic cartilage is exceedingly troublesome and may cause pain for several months. Cancers on the dorsum of the hand should be excised, as heavy irradiation near synovial membranes gives a complete disability of the hand for several weeks. Cancer of the scalp should be excised, if possible, for there is danger of causing necrosis of the skull.

RECURRENCES

Many of the old patients show numerous degenerative areas in their skin, and they are very apt to develop numerous cancers. Some are in the form of keratoses when the patients first come to the clinic, and they respond readily to light amounts of radium.

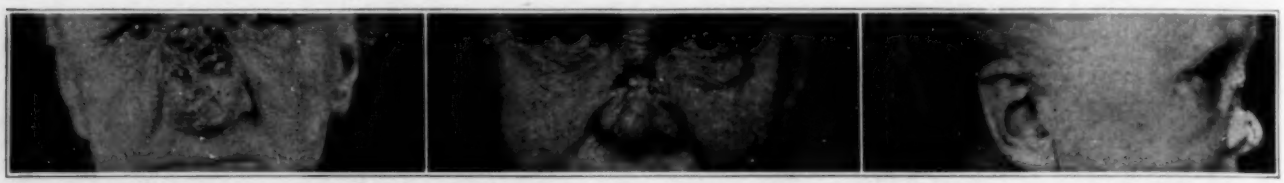

Fig. 3.—Carcinoma of the nose of six years' duration. Sixteen surface radium treatments were given in small amounts at weekly intervals; lesion was destroyed but bad defect left in nose. Patient did not wish plastic operation. Well four years later.

required. Gamma radiation causes a fibrosis and checks the growth but does not destroy it.

One of the biggest advances in the treatment of large lesions has been in the use of emanation in the form of tiny pinhead capsules or "seeds." These were first used at the Huntington Hospital in 1915, but they are more in use today than during the period of this report. One millicurie in a seed destroys about 1 c.c. of tissue. Seeds are therefore inserted in lesions having such a volume, or into larger lesions in such a way that there is 1 cm. between them. Each seed will give 132 millicurie hours' irradiation before its value is used up. Care must be taken in placing them, for if they are not properly placed, or if they move along fascia planes, they may damage vital structures. Probably the best method is to use these for the first treatment to slough off the surface of the lesion, and then to depend on surface applications to finish the destruction. The discrepancy between the dosage of 15 millicurie hours mentioned for surface dosage and that of 132 millicurie hours from a "seed" is to be noted. It is a well known fact that large amounts of radium over a short period of time are more effective than small amounts for longer periods. The "seed," if not displaced or lost out in the sloughing area, ceases to be effective in two weeks, but, as it loses one sixth of its value each day, it is practically ineffective after one week.

From irradiation of the heaped up skin cancer there is practically no scar. If there has been loss of tissue by the ulcerating new growth or if the radium has been

RESULTS

A rough classification of these cases has been made from the description in the record, without knowing the end-results. Patients who had lesions limited to one definite area of the skin, without encroachment on neighboring parts, without fixation and without bone or gland involvement were placed in Class A. These cases, embracing 69 per cent. of the total, were cases that unquestionably should have been cured by either radium or excision. Radium was to be preferred in many because of the location and the danger of deformity from excision. Of 138 cases traced radium cured 112, while four more were cured by excision after irradiation. This gives a total of 116, or 84 per cent.

Class B, including 20 per cent. of the total, comprised those cases in which there was a slight degree of fixation or in which the lesions extended to a second structure, as cancer of the nose extending on the face or eyelid. There was some doubt as to the possibility of cure in these cases, but radium was considered to offer more chance than excision. Of thirty-nine patients, fifteen were cured by radium and four others by operation after radium, giving a total of nineteen, or 48.4 per cent.

In Class C were placed 11 per cent., cases in which the possibility of cure was considered remote. There was extension to fascia, cartilage, bone or glands. Radium alone did not cure any of these twenty-eight

cases, but surgical removal following irradiation cured one, or 3 per cent.

The three year period of cure dates from the last radium treatment. The majority of patients were examined in the clinic at the end of this time. However, the personal statement of the patient was accepted in a few cases, provided he was free from disease at the time of his last visit. Patients who died with cancer still present are recorded as "died of cancer" whether or not there was another cause. This makes the results seem poorer than they really are. There were a few cases which were thrown out as inconclusive. Some of these patients had had other treatment during the same three year period. Two were mildly insane patients and were treated for only a short time. Others were aged persons who came for one treatment only—not enough to cure them.

The average number of radium treatments given the cured patients was three.

There are seventeen of this group who are still alive with the disease. About one half are still under treatment. The others are too old, or their disease is too extensive to permit them to attend the clinic.

Several patients had small recurrences which were treated. Those who have been well three years since the last treatment are included as cures. Several others are excluded as inconclusive because the time interval is less.

The final results give 62.5 per cent. cured by radium alone, and 4.4 per cent. by radium followed later by operation; 24.6 per cent. died with cancer still present.

TABLE 4.—*Results by Regions*

Location	Total	Untraced Three Years	Died of Intercurrent Disease	Inconclusive	Patients Available for End-Results	Well Three Years	Well Three Years, Radium and Operation	Died of Cancer	Alive with Cancer
Nose	72	6	4	3	57	44	0	8	5
Nose and adnexa	20	1	2	0	17	7	3	5	2
Ear	18	2	3	1	12	7	2	3	0
Ear and adnexa	4	0	0	0	4	0	0	4	0
Lower lid	19	3	2	0	14	13	1	0	0
Lower lid and adnexa	3	1	1	0	1	1	0	0	0
Upper lid	5	0	1	1	3	3	0	0	0
Both lids and adnexa	6	1	0	0	5	1	1	1	2
Inner canthus	13	3	3	0	7	5	0	0	2
Outer canthus	2	2	0	0	0	0	0	0	0
Cheek	53	3	8	1	41	26	1	13	1
Temple	10	0	0	0	10	8	0	2	0
Forehead	8	1	0	0	7	2	1	2	2
Chin	2	0	0	0	2	2	0	0	0
Scalp and mastoid	10	0	1	0	9	1	0	7	1
Neck	5	0	1	0	4	3	0	1	0
Hand	3	1	0	0	2	2	0	0	0
Leg	3	1	0	0	2	1	0	1	0
Upper lip	5	1	2	0	2	1	0	1	0
Abdominal wall	1	0	0	0	1	0	0	0	1
Multiple	3	0	0	0	3	0	0	2	1
Total	265	28	28	6	203	127	9	50	17

Finally, the length of life has been increased in many patients who later died of cancer. In numerous cases, suffering has been alleviated or prevented.

SUMMARY

1. Skin cancer was treated by radium in 265 cases, and the end-results were ascertained in 203 cases.

2. The results of treatment of the early cases show 81 per cent. of cures by radium, and 3 per cent. by operation following radium. The moderately advanced cases show 38.4 per cent. of cures by radium, and 10 per cent. by radium and operation. None of the advanced cases were cured by radium and only 3 per cent. by the combined treatment.

3. The results of all cases give 62.5 per cent. of three year cures by radium alone and 4.4 per cent. more by operation following radium.

4. In cancer of the nose alone, there were forty-four cures in fifty-seven patients. When it involved the adjacent structures, there were ten cures out of seventeen cases. The ear cases showed nine well of twelve treated, but when the disease spread from the ear to surrounding tissues the patients all died. The eye cases were the most satisfactory of all, there being twenty-five cures out of thirty cases. There was but one death, the other patients being alive with the disease. The other large group of patients, those in whom the cheek was involved, gave twenty-six cures out of forty-one possibilities.

5. The results given are of two year cases and include all cases treated by radium, early and advanced. Patients dying with cancer still present are recorded as dying of cancer.

6. It seems fair to conclude that radium is the treatment of choice in cases of cancer of the nose and the eyelids, when operation would cause severe deformity. It is a perfectly satisfactory method of treating skin cancer in any location, although excision is satisfactory when the lesion lies in an area in which no deformity would result. Anything but the most superficial lesions on the ear or dorsum of the hand should be excised.

7. The best method of treatment is to destroy the gross lesion by the insertion of 1 millicurie radium emanation seeds, one to each cubic centimeter of tissue. Emanation tubes in steel jackets should then be used to destroy any remaining growth, from 12.5 to 15 millicurie hours to an area, the tubes not nearer to each other than 1 cm. An alternate method is to place such a tube on 1 cm. of gauze or wood or on a hollow brass cone. In this case the dose should be quadrupled.

8. Palliation and relief from pain may be given in some cases in which cure is out of the question.

483 Beacon Street.

TABLE 5.—*Patients Alive Three Years*

	A	B	C	Total
Alive and well three years	116	19	1	136
Alive and under treatment for original lesion	3	0	2	5
Alive but not under treatment	4	3	0	7
Recurrent and under treatment	4	0	1	5
Total number alive three years	127	22	4	153
Pecentage				75.4

Chinese Medical Sayings and Proverbs.—1. The doctor has the heart of parents. 2. A doctor has the heart to cut flesh off the thigh, but never the mind to deceive a patient. 3. When you are poor there is no clever man who will present you with money, but a doctor will give you a prescription if you are ill. 4. Men worry over the great number of diseases; doctors worry over the small number of remedies. 5. A teacher will not speak against a teacher nor a doctor against a doctor. 6. The sorcerer recites and chants for people and is benefited by their death; a doctor treats the people's sickness and is benefited by their living. 7. A doctor's character should be square, his knowledge round, his gallbladder large and his heart small (a large gallbladder signifies bravery, a small heart means carefulness). 8. The good doctor first treats the disease of the nation, then human ailments. 9. The high grade doctor serves the nation; the middle grade doctor, the individual; and the low grade doctor treats physical ailments.—*China M. J.* **39**:1100 (Dec.) 1925.

UNUSUAL BILE DUCT VISUALIZATION BY ROENTGENOGRAMS OF BARIUM MEAL*

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AND
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The case we are reporting presents certain features which we have been unable to find reported in the literature.

REPORT OF CASE

W. H., a man, aged 70, was admitted, April 12, 1924, to the R. W. Long Hospital, with the complaint of pain and cramping in the right upper quadrant of the abdomen. His health previously had been essentially good except for repeated attacks of "stomach trouble" during a rather indefinite period of from twenty to twenty-five years. Five years before his admission to the hospital there was an unusually severe attack, accompanied by considerable prostration and requiring bed rest for some days. This was the only attack in which the patient was markedly jaundiced. Milder attacks of pain and cramping in the right upper quadrant of the abdomen persisted up to the time of admission to the hospital. After his admission there was one very mild attack, which followed ingestion of the morning meal, but was not accompanied by nausea, vomiting, jaundice or changes in defecation.

Fig. 1.—Fifteen minutes after ingestion of barium meal, patient in prone position: *S*, stomach flattened by pressure on Potter-Bucky diaphragm; *D*, duodenal bulb; *G*, gallbladder; arrow marks site of fistula.

The patient was of average height, weighed about 180 pounds (82 kg.) and was fairly well preserved. The abdomen was full and rounded. Deep palpation over the gallbladder and posteriorly along the costal border revealed considerable tenderness. The liver was palpable two finger breadths below the costal margin in the right midmammary line. There was no demonstrable ascites. The spleen was not palpable. A tentative diagnosis of cholecystitis with probable cholelithiasis was made.

Routine laboratory examinations showed a normal blood picture and a negative Wassermann reaction. Urinalysis suggested a chronic nephritis with somewhat high specific gravity; albumin present, from a trace to two plus; and occasional casts. The phenolsulphonephthalein function test revealed 35 per cent. eliminated in two hours.

Fig. 2.—Barium in bile ducts two hours after meal.

Roentgen-ray studies were made, April 13 and 14, and were corroborated, May 5 and 6. Films of the gallbladder, taken directly, were negative. After a barium meal, slight prepyloric roughening could be seen with inconstant visualization of the ampulla of Vater with the patient in the erect position. In the prone position, an unusual condition was found: The barium was seen to have left the duodenum and to extend upward to form an irregularly rounded shadow in close proximity to the duodenal bulb in the usual position of the gallbladder, but smaller than the gallbladder. As the gallbladder filled with the intermittent filling and emptying of the duodenum, the cystic and then the right and left hepatic ducts became visible. The common duct was then gradually visualized down to the ampulla, and, as the barium passed like a flow of bile down to the ampulla, there was also a back flow into the smaller hepatic ducts. The evidence, as found on the screen and in stereoscopic films, indicated that the biliary tract had filled through a fistula between the duodenum and gallbladder. Films two and four hours later showed considerable barium remaining in the minor hepatic ducts and a moderate amount in the common duct. After twenty-four and forty-eight hours, traces of barium were still visible in the small ducts. The conclusion from the roentgen-ray findings was that gallbladder disease had been followed by spontaneous cholecystoduodenostomy.

The Rosenthal phenoltetrachlorphthalein liver function test showed only 4 per cent. retention of the dye at the end of fifteen minutes, with none retained at the end of one hour. A pancreatic function test by the diastase method of Brown gave a high normal value of more than 240,000 units.

* From the medical and roentgen-ray services of the Robert W. Long Hospital, Indiana University School of Medicine.

Repeated attempts at gallbladder drainage by the Meltzer-Lyon method yielded only a continuous flow of "A" bile, or of "A" bile followed immediately by "C" bile. From the last bile obtainable, *B. coli-communis* could be demonstrated in a direct smear of a centrifugalized specimen, and cultivated in numbers showing the bacterial content to be approximately 360,000 per cubic centimeter of bile.

Operative procedures were deemed inadvisable, by Dr. C. P. Emerson, on account of the age and general condition of the patient, and the absence of assurance that the common duct was open. It is known that a surgical anastomosis between these structures usually closes if the cystic and common ducts are patent. In this instance a simple diet and a regular mode of living, as followed at the hospital, gave almost complete symptomatic relief. This patient was later shown by Dr. Emerson at the 1924 session of the American Medical Association in Chicago.

CASES PREVIOUSLY REPORTED

There have been only a few cases reported in which the bile ducts have been visualized. Stephenson,[1] in 1921, reported the case of a man, aged 56, whose gallbladder had been removed in 1916 without the finding of stones, and who submitted to further examination in 1921 for recurrence of trouble suggestive of ulcer. At this time barium was found in some of the larger bile ducts, which became filled through the common duct. He was able to show by a roentgen-ray examination, a year later, that the condition persisted, yet there was no clinical evidence of hepatitis or choledochitis. No liver function tests were reported.

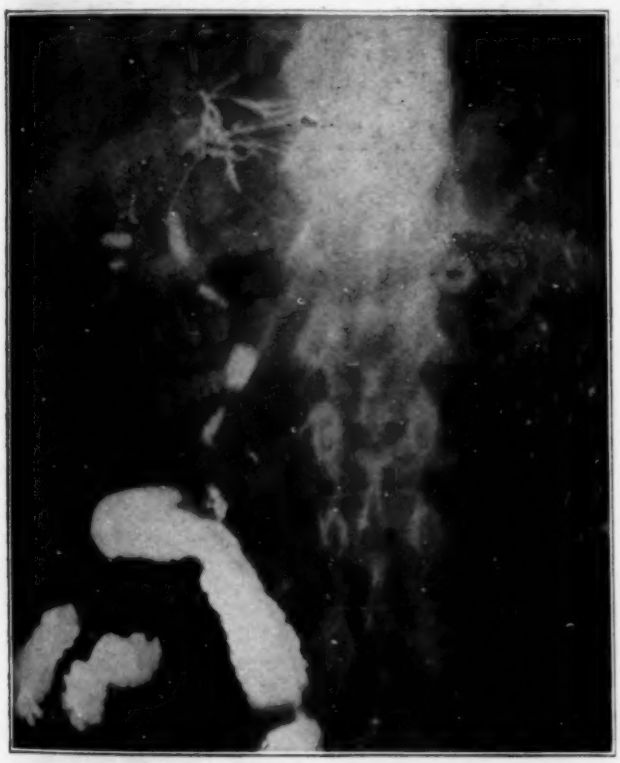

Fig. 3.—Four hours after meal; arrows indicate barium remaining in common duct.

Carman[2] reports a case of cancer of the pylorus in which perforation into the gallbladder was observed. The communication was shown by the barium meal, and some of the hepatic ducts were also visualized.

Beall and Jagoda[3] described the case of a woman with acute gastro-intestinal colic in whom roentgenologic study during the attack showed the barium contained in the common and hepatic ducts, but without gallbladder visualization. At operation a normal gallbladder was found with the pancreas enlarged and hardened and an abscess in the upper left portion of the lesser peritoneal cavity, bounded by a mass of adhesions. The conclusion in this case was that barium would probably be seen more often in the bile ducts in cases of increased intravisceral pressure if roentgen-ray studies were made during such attacks. In support of this opinion a roentgen-ray film was presented. At necropsy on a person dying from an extra-abdominal condition, bile was found in the common duct. Barium was forced, under high pressure, from the duodenum into the bile ducts, as demonstrated by this film.

Fig. 4.—Twenty four hours after meal; traces of barium remain in smaller ducts.

However, since the pressure required was sufficient to rupture the gallbladder that was presumed to be normal, these conclusions do not seem to us to be well founded.

Case[4] discussed the roentgen-ray findings after surgical cholecystenterostomy, but reported no instance of visualization of the bile ducts.

Judd and Burden[5] discuss in detail the subject of internal biliary fistula, reviewing the 153 cases seen at the Mayo Clinic. The great majority of these were between the fundus of the gallbladder and the duodenum. In fifty-five of these cases there were stones

1. Stephenson, F. B.: Opaque Meal in the Liver Ducts, J. Radiol. **2**: 35 (April) 1921.
2. Carman, Russell: Roentgen Diagnosis of Diseases of the Alimentary Canal, Philadelphia, W. B. Saunders Company, 1920, p. 434.
3. Beall, F. C., and Jagoda, Samuel: Injection of Bile Ducts with Barium, J. A. M. A. **76**: 1483-1484 (May 28) 1921.
4. Case, J. T.: Roentgen Observations on the Duodenum, Am. J. Roentgenol. **3**: 314-326 (June) 1916.
5. Judd, E. S., and Burden, V. G.: Internal Biliary Fistula, Ann. Surg. **81**: 305-312 (Jan.) 1925.

in the common duct. The clinical diagnosis of fistula between the gallbladder and the intestinal tract was made in only two cases; one was the case reported by Carman;[2] the other, a case of fistula between the gallbladder and the colon, was demonstrated by the roentgen ray after a barium enema.

The various authors agree that such a fistula rarely occurs in the absence of calculi. In this case, ulceration and rupture probably occurred in 1919. As the ducts must fill each time the patient ingests food, the backing up of the duodenal contents thrice daily, with the infection and overdistention of the ducts, may, very probably, be giving rise to biliary cirrhosis. Clinical and laboratory evidence, however, justify the conclusion that, at least up to the present time, there has been no serious disturbance of the liver cells. This patient is to return at a later date for further observation and consideration as to treatment.

CONCLUSIONS

1. The intrahepatic bile ducts of this patient were filled by the barium meal, evidently through a spontaneous cholecystoduodenostomy, and were clearly visualized.
2. The bile ducts are probably filled in a similar manner by duodenal contents, after meals, particularly when the patient lies down after eating. The retention of the barium in the ducts indicates that food material, with its accompanying bacterial content, must be present in the bile ducts at all times.
3. Although this marked abnormality has been present probably for five years, it has caused no functional change, so far as can be determined by the usual liver function tests.

RECURRENT DUMB-BELL STONE IN VESICAL BLADDER AND DIVERTICULUM

REPORT OF CASE

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The more universal application of combined cystoscopic and roentgenoscopic study of the urinary tract has shown the incidence of vesical diverticulum and calculus to be much higher than was formerly thought to be the case. The functional end-results from operations on the urinary tract are largely governed by the preoperative diagnosis and treatment. This is especially true in the case of bladder stones and diverticula, which occur with such frequency that their presence must always be considered in any operative procedure on the bladder and its contents. Diverticulum of the urinary bladder occurs in approximately 5 per cent. of those persons reaching the prostatic age. Hunt[1] reports 1,360 cases of adenoma of the prostate; he found calculi present in 15 per cent., while diverticula were present in 5 per cent. Judd in a series of 133 cases of diverticula of the urinary bladder found stone present in twenty cases. In nine, the stone was situated in a diverticulum, and in three cases a dumb-bell stone was found in both the bladder and the diverticulum. This type of stone formation is very rare, as only eight cases have been reported in the literature. Three cases were reported by Judd and Scholl[2] from the Mayo Clinic, and one each by S. P. Martin,[3] E. G. Davis,[4] E. Beer,[5] H. H. Young,[6] and H. W. E. Walther.[7] This condition is considered of sufficient rarity to warrant reporting a ninth case of recurrent dumb-bell stone in vesical blader and diverticulum.

1. Hunt, V. C.: Surgery of the Prostate, Mayo Clinic Papers, Philadelphia, W. B. Saunders Company **15**: 505-511, 1923.

REPORT OF CASE

C. L. N., a white man, aged 65, referred by Dr. H. F. Davies of Washington, D. C., entered the hospital, June 26, 1925, complaining of intense tenesmus and frequency of urination, with hematuria. He had measles, pertussis and parotitis when a child, but no other serious illness until 1915, when he began to have frequency of urination and hematuria. The urinary

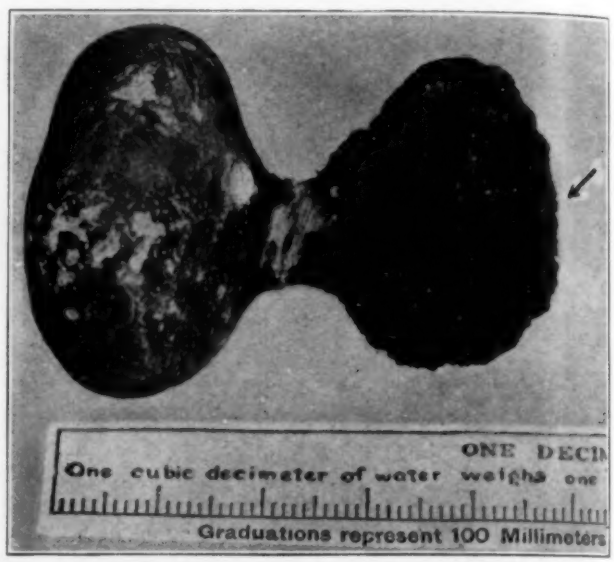

Fig. 1.—Dumb-bell shaped stone, after removal from bladder and diverticulum. The arrow points to the bladder stone.

symptoms gradually became worse, especially when the patient was on his feet. Considerable difficulty was experienced in completely emptying the bladder. The pain, dysuria and presence of blood in the urine caused him to seek medical attention. May 20, 1918, a cystoscopy was done, and a large stone was found in the bladder. A suprapubic cystostomy was done at this time and the stone removed. The patient was unable to void following the operation and required continuous catheterization since the operation. Three years before I saw him, the pain again increased in severity and there was passage of some blood in the urine. A second cystoscopy was done in 1920 and an operation advised. This was refused, as the patient was not informed as to the cystoscopic findings. I saw the patient, May 2, 1925, for the first time. The physical findings at this time showed a well developed adult, suffering intense pain in the region of the bladder. The head, including the chest, was normal. The heart sounds were very faint, but no valvular changes were detected. The pulse was soft and regular and the arteries were soft. The abdomen was slightly distended, with a scar in the suprapubic region of the former operation. The temperature, pulse and respiration were 100, 90 and 20, respectively. The systolic blood pressure was 110, the diastolic, 70; the circulatory index, 57 per cent. Rectal examination revealed slight enlargement of the prostate. A twenty-four hour specimen of urine showed a specific gravity

2. Judd, E. S., and Scholl, A. J.: Diverticulum of the Urinary Bladder, Surg., Gynec. & Obst. **38**: 14-26 (Jan.) 1924.
3. Martin, S. P.: Dumb-Bell Stone in Diverticulum of Urinary Bladder, Ann. Surg. **67**: 94-95 (Jan.) 1918.
4. Davis, E. G.: Recurrent Vesical Calculi Associated with Calculus in Diverticulum and Contracture of Vesical Orifice, Surg., Gynec. & Obst. **30**: 503-505 (May) 1920.
5. Beer, E.: Dumb-Bell Stone in Bladder and Diverticula, Philadelphia, W. B. Saunders Company, S. Clin. N. Am. **5**: 102 (Feb.) 1925.
6. Young, H. H.: Treatment of Vesicular and Diverticular Calculi, Tr. South. Surg. & Gynec. A. **24**: 382-408, 1911.
7. Walther, H. W. E.: Fulguration of Diverticular and Bladder Stone. J. Urol. **2**: 253 (June) 1918.

of 1.016; it was alkaline in reaction, and there was no sugar. Albumin was 2; pus, 4 on a scale of 4. No casts were seen. The hemoglobin was 80 per cent, with 4,500,000 red blood cells. The blood urea was 30 mg. per hundred cubic centimeters of blood. An intramuscular phenolsulphonephthalein test showed 35 per cent the first hour and 18 per cent the second hour. A cystoscopy was advised, but the patient refused to have it done; he agreed to a roentgenogram of the urinary tract. The upper tract was normal. In the bladder region, a dumb-bell shaped shadow was seen, slightly lateral to the normal bladder outline. The lateral shadow was more opaque to the roentgen ray and measured 5 by 6 cm. The caudad shadow was very light in comparison, quite irregular at the mesial border and measured 6 by 7 cm. The patient refused to have the bladder filled with sodium mercuric iodid solution, in order that a cystogram might be made. The preoperative diagnosis was an hour glass shaped stone in the bladder and diverticulum. A suprapubic cystostomy was done and the bladder stone located. Owing to the narrow neck of the diverticulum, the diverticular stone could not be delivered into the bladder. The sac containing the stone was resected extravesically and both sections of the stones were removed. There was a small median lobe enlargement of the prostate, which was not removed at this time. The bladder was closed in the usual manner, with a cigaret drain to the site of the diverticulum. The part of the stone confined to the bladder was dark red and was composed of uric acid. The diverticular part of the stone was very hard, white and contained phosphatic deposits principally. The pedicle measured 1 by 1 cm. and was firmly attached to both parts of the stone.

COMMENT

The source of the majority of urinary calculi is the kidney, but the absence of any renal symptoms, together with the history of recurrence, is presumptive evidence of the diverticulum as the source of this stone. Two hypotheses concerning stone formation in the urinary tract are fulfilled in this case; viz., obstruction to the outflow of urine and residual urine. That a third factor plays an important part in the development of calculi is shown by the fact that in 123 cases of diverticulum of the bladder reported by Judd, only twenty contained stones. This factor is infection, as has been demonstrated by Rosenow, Meisser and others. In my report of bilateral nephrolithiasis with calcification of the renal vein,[8] it was brought out that the patient had a chronic infection of the teeth, extending over a long period of time. This finding supports the theory that certain strains of bacteria are capable under favorable surroundings of producing lithiasis, if extended over a sufficient period of time. Keyser has produced deposits of urinary salts experimentally by administering an ester of oxalic acid to rabbits, which results in overwhelming the protective colloids of the urine, with a precipitation of oxalic acid crystals. In this case report, the recurrent bladder calculus was doubtless due to the extension of the diverticular stone into the bladder, thus serving as a nidus for the bladder stone. This would have been an excellent case for lithotrity, had the diverticulum not been present, for the bladder stone was soft and crumbled easily.

Fig. 2.—Bladder area, showing dumb-bell shadow and soft rubber catheter.

8. Stirling, W. C., and Lawrence, C. S.: Calcification of Renal Vein, with Bilateral Nephrolithiasis: Report of Case, J. A. M. A. **82**: 25-27 (Jan. 5) 1924.

SUMMARY

1. Vesical calculi and diverticula are frequent complications of adenoma of the prostate, and routine cystoscopic and roentgenographic examinations should be made previous to operation, unless some definite contraindication is present.

2. Dumb-bell shaped stones are infrequently seen in the urinary tract and doubtless originate in the diverticulum, owing to the chronic stasis of urine, plus infection.

3. Infection is a large factor in the production of lithiasis, and every effort should be made to eradicate any focus as well as to clear up the renal involvement, for if this is not done the same factors are present for the reproduction of subsequent calculi.

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KALA-AZAR

A CASE OCCURRING IN NEW YORK

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The disease known as kala-azar occurs endemically in certain areas of India, China, Russian Turkestan and in the countries bordering the Mediterranean sea. In these localities also, epidemics in which the mortality rate is extremely high are not uncommon. In the Western Hemisphere, however, the condition is extremely rare, although the climatic and other conditions that the disease finds most favorable for its spread in the endemic areas of the Old World can readily be duplicated in America. To date, only four cases, three of which occurred in the United States, have been reported in American medical publications. Talbot and Lyon,[1] in 1918, reported a case seen in Boston in a Greek child who recovered, following splenectomy and the intravenous administration of antimony and potassium tartrate (tartar emetic). In 1923, Faber and Schussler[2] reported a case, successfully treated with antimony and potassium tartrate, in an Italian child seen in San Francisco. Martha Wollstein[3] recently reported from New York City a third case of visceral Leishmania infection in an Italian boy, 21 months old, who died from a complicating noma two weeks after the commencement of intravenous treatment with antimony and potassium tartrate. In addition to these three cases, Migone[4] reported a case in an Italian adult from Ascunçion, Paraguay, making the fourth case observed in the Western Hemisphere. The following is submitted as a report of an additional case:

REPORT OF CASE

History.—E. U., an East Indian, aged 22, was admitted to the Moses Taylor Hospital, Lackawanna, N. Y., April 6, 1924, following an accident. He was working on a scaffold about 15 feet from the ground, when the rope supporting the scaffold

1. Talbot, F. B., and Lyon, A. B.: Kala-Azar in a Child, Am. J. Dis. Child. **16**: 154 (Sept.) 1918.
2. Faber, H. K., and Schussler, H., Jr.: Leishmaniasis in the United States, J. A. M. A. **80**: 93 (Jan. 13) 1923.
3. Wollstein, Martha: A Case of Kala-Azar in an Infant, New York State J. Med. **25**: 413 (March 13) 1925.
4. Migone, L. E.: Un Cas de Kala-azar à Asunçion (Paraguay), Bull. Soc. de path. exot. **6**: 3 (Feb. 12) 1913.

broke and he fell to the ground, striking his left side on a pile of iron bars. He complained of pain in the left hypochondrium.

The patient was born and raised in the Calcutta district, India, and had been in the United States sixteen months at the time of his accident. He stated that his health had always been good, with the exception of an attack of fever five years before, which had lasted two weeks. He gave no history of contact with kala-azar cases and had successfully passed medical examinations at Colombo, the port of embarkation for America; at the Suez Canal, en route, and at the port of entry to the United States. For several years before coming to this country, he had been employed as a dock laborer at Colombo.

His father had died eight years before from a cause unknown to the patient. The mother, three brothers and one sister were all alive and had had no serious illnesses.

Physical Examination.—The patient was well developed and fairly well nourished. He complained of pain in the left side but had not the appearance of acute distress. His manner was listless and depressed. The abdomen was prominent, with slightly more marked fulness in the upper left quadrant. Slight tenderness was present in the left hypochondrium and, on pressure, into the left costovertebral angle. Resistance was present in the upper left quadrant on palpation, and a tense, rounded mass could be made out beneath the left costal margin, which extended downward and toward the midline about two finger breadths beneath the lower border of the ribs. The mass moved with respiration and was dull on percussion. No notch was felt on the border. The lower border of the liver was not palpable. No other organs or masses were palpable in the abdomen. Examination of the cardiovascular system, respiratory system, neuromuscular system and oral cavity revealed nothing of significance. The external genitals were apparently normal. Rectal examination revealed nothing

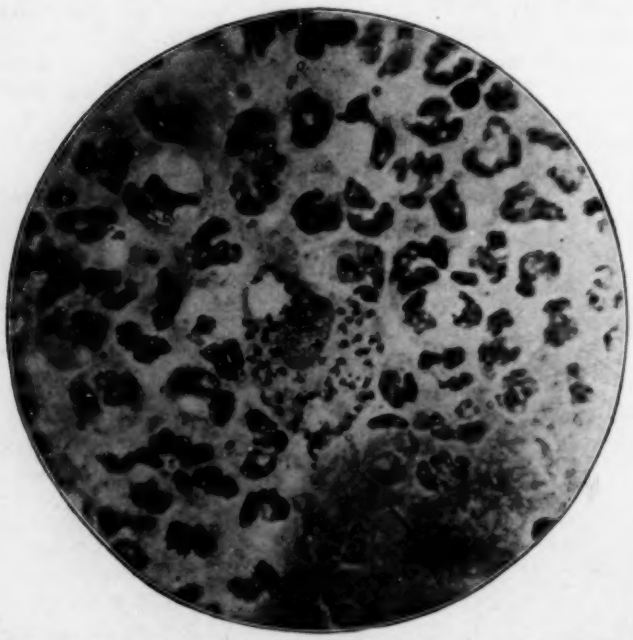

Fig. 1.—Smear from splenic pulp, showing a large mononuclear cell in the center, the cytoplasm of which is filled with Leishman-Donovan bodies.

abnormal. The extremities were normal, except for the absence of the right little finger, which had been amputated at the proximal interphalangeal joint.

Laboratory Findings and Special Tests.—On admission, blood was grossly present in the urine, persisting for more than two weeks in gradually lessening degree. Microscopically, blood (from 6 to 8 red cells per high power field in an uncentrifugalized specimen) was found continuously during the period of observation, as were also numerous granular casts. Albumin in moderate amounts was a constant finding. The specific gravity of repeated specimens was rarely above 1.015, and more often was in the neighborhood of 1.010.

Repeated blood counts have shown the red cells to be ranging in number from 3,300,000 per cubic millimeter, on admission, to 3,720,000 at the present time, with a high peak in the interval of 3,900,000 per cubic millimeter. The white cell count on admission was 5,000 per cubic millimeter, and at the present time is 3,200. In the interval, counts of 3,500, 3,100, 2,000, 1,800, 1,800, 2,300, 1,700, 3,080, 3,200, 2,140, 2,200,

Fig. 2.—Kala-azar: wasting of the extremities and prominent ribs, in contrast to the tumid abdomen. The white outline indicates the degree of splenic enlargement.

2,300, 2,800, 2,600, 3,500 and 2,800 cells per cubic millimeter have been recorded. Smears showed very little change in the appearance of the red cells, while on differential counts of the leukocytes the polymorphonuclear types ranged from 50 to 39 per cent., the lymphocytes from 36 to 49 per cent. and the large mononuclear cells from 12 to 34 per cent. over the eleven months' period he was under observation. Repeated careful examinations failed to disclose the presence of microorganisms in blood smears. The coagulation time was only slightly slower than normal.

The blood Wassermann reaction was reported negative, April 11, and a Widal test, taken April 14, was also negative. Repeated examinations of the sputum failed to demonstrate the presence of tubercle bacilli. Pirquet tests on two occasions gave negative results. The urine sediment showed no tubercle bacilli in direct smear, and on inoculation into a guinea-pig failed to produce tuberculous lesions.

No parasites or ova were found on microscopic examination of the stools, nor could blood be demonstrated macroscopically or by chemical tests. Roentgen-ray examination of the chest and abdomen revealed nothing of significance.

Course, Diagnosis and Treatment.—The diagnosis at the outset was obscured by the history of trauma and by the presence of hematuria. Undoubtedly the kidney had been ruptured as a result of the injury to the left side, and this

was thought for a time to account for the symptoms exhibited. The persistence of an irregular pyrexia, after gross blood had disappeared from the urine, and after a reasonable time for the repair of any injury had elapsed, combined with an increasing enlargement of the spleen, at once brought up the possibility of some form of so-called primary splenomegaly. Early a suspicion arose that we were dealing with a case of kala-azar, because, besides splenomegaly, irregular pyrexia, leukopenia, diminution of the polymorphonuclear elements and increase in the percentage of large mononuclear leukocytes are also prominent features of that disease. However, the patient's general nutrition remained fair. No double remissions of temperature in a twenty-four hour period were noted, and repeated smears of the peripheral blood failed to show the presence of Leishman-Donovan bodies.[5]

May 13, the patient was placed on cod liver oil, one half ounce (15 c.c.) three times a day after meals, and at the same time efforts were made to improve by an increased diet his nutrition, which had fallen off somewhat since his admission. By July 22, he had gained several pounds and had been free from fever for a period of three weeks. The spleen showed appreciable, but slight, increase in size following admission, and there were no subjective complaints. The patient remained somewhat apathetic, and the blood picture was still far from normal, the white cell count being 2,300 per cubic millimeter and the red cell count 3,900,000. July 22, he was allowed to go home with instructions to report at the hospital twice a week for observation.

August 15, the patient was readmitted to the hospital, with a temperature of 100.4. On examination, the spleen was found to have increased in size and was now down to the level of the umbilicus, extending in width to the midline. An area of hyperpigmentation was noted, extending over the cheeks and the bridge of the nose; over the remainder of the body the color was distinctly darker than that of other members of his race. August 24, 25, 26 and 27, the temperature chart showed two distinct remissions in each twenty-four hour period—the first time that this phenomenon had been observed since the patient came under observation. The second week after readmission, he had an attack of bronchitis of moderate severity, and blood counts taken at this time showed a white cell count of 3,050 per cubic millimeter, and a red cell count of 3,540,000.

September 17, under general anesthesia, the abdomen was opened to the left of the midline by a 3 inch intermuscular incision, so as to expose the anterior border of the spleen. The spleen was found enlarged, firm, smooth and slightly purplish. The left kidney on palpation was apparently normal. A needle puncture was made in the anterior border of the spleen and a grooved director forced through the hole in the capsule to a distance of 1½ inches. By this procedure, a quantity of splenic pulp was obtained. Hemorrhage from the puncture was very free for a time but was controlled by the application of gauze pressure for a few minutes. The abdomen was then closed, and the patient returned to the ward in good condition.

Smears were made from the splenic pulp immediately and stained with Wright's blood stain. Typical Leishman-Donovan bodies were found in large numbers, both extracellular and in the cytoplasm of the large splenic macrophages (Fig. 1). Material was also taken to the laboratory of the Buffalo General Hospital, where Dr. Benjamin Roman, pathologist, confirmed my diagnosis.

September 25, intravenous treatment with antimony and potassium tartrate was commenced. An initial dose of 2 c.c. of a freshly prepared 2 per cent. solution was given and was repeated at three day intervals until November 17, when the patient developed an attack of acute bronchitis, which was succeeded, December 1, by an attack of acute mastoiditis. It was thought inadvisable to continue intravenous treatment during these complications, and conservative measures were adopted for the care of the mastoid infection, which quickly passed into a chronic phase—a small amount of discharge from the left ear continuing up to the time of this report. December 29, treatment with antimony and potassium tartrate was resumed, and each treatment was followed by a mild temperature reaction. The patient complained of abdominal distress, which lasted for from twelve to sixteen hours. Jan. 24, 1925, a dose of 3 c.c. of a 2 per cent. solution of antimony and potassium tartrate was given intravenously and was followed by nausea and vomiting. January 27, the dose was reduced to 2 c.c. of a 2 per cent. solution, and was again followed by nausea.

At this point it was thought advisable to discontinue the treatments with the drug, as no beneficial effect had been observed. The white cell count showed no appreciable change during the course of treatment that could in any way be ascribed to a beneficial action of the drug. The spleen, which at the commencement of treatment was down to the level of the umbilicus and extended to the midline, showed no regression as the result of treatment. The general nutrition of the patient had become noticeably worse (Fig. 2), and he still retained his listless and apathetic attitude. In all, twenty-five treatments were given, a total of 0.3 gm. of antimony and potassium tartrate.

February 1, quinin medication was begun, 10 grains (0.65 gm.) of the hydrochlorid after each meal, and this treatment was carried on until March 8, with no apparent change in the patient's physical condition. Subjectively, however, he was much better and left the hospital (March 8), against advice.

The patient has not been observed since that date.

COMMENT

This case is an example of the chronic type of the disease, which is so frequently seen in the endemic areas of India. Undoubtedly the infection in this case occurred before the patient left India and possibly dates back to the attack of fever that he had five years ago. It may be pointed out that chronic cases of kala-azar are not readily detectable by the hurried methods of examination necessary in the handling of large groups of immigrants. There is, therefore, in spite of the obscurity of the mode of transmission, some danger of the disease being imported and implanted in this country, unless more careful watch is maintained over immigration from endemic kala-azar centers.

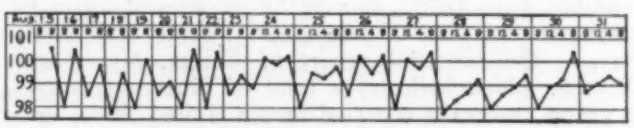

Fig. 3.—Temperature after readmission.

In this case it cannot be claimed that the antimony and potassium tartrate has effected a cure. Nevertheless, in the eleven months during which the patient was under observation, the disease, beyond noticeable enlargement of the spleen, had shown little progress, in spite of the associated severe trauma to the kidney, acute mastoiditis and several attacks of acute bronchitis. This would appear to be one of those cases in which the organism developed immunity toward the action of antimony and potassium tartrate, possibly as a result of the interruption of treatment during the course of an acute infection. Intolerance for the drug developed, although the dosage used has frequently been exceeded in other cases.

An important and debatable feature of the case under discussion is the relation of injury to the disease. Can the latent form of the disease, as in this case, be lighted up by injury to the organs harboring the Leishman-Donovan bodies? No reference to this question was

5. Leishman, W. B.: On the possibility of the Occurrence of Trypanosomiasis in India, Brit. M. J. 1: 1252, 1903. Donovan, C.: On the Possibility of the Occurrence of Trypanosomiasis in India, ibid. 2: 79, 1903.

found in the literature.[6] My patient, who previous to his injury was carrying on at his usual work, after all the effects of the injury had disappeared, was still unable to work, evidently on account of his Leishmania infection. This question, obviously, has an important bearing on the subject of compensation.

Moses Taylor Hospital.

Special Articles

THE FREQUENCY OF BOTULISM

A REPORT OF OUTBREAKS FROM 1922 TO 1926

Occasional outbreaks of botulism continue to be reported in the United States. The rarity of the disease, often stressed by various writers, has apparently never been questioned. The publicity usually attendant on outbreaks has been less in recent years, but it would appear to be far in excess if one considers comparatively the recorded morbidity and mortality.

There is, however, and perhaps rightly so, great importance placed on each outbreak because of its fatal sequence to those who consume the contaminated and toxic food. Likewise, the relation of the intoxication to our preserved food supply is always decidedly menacing, as this supply is rapidly becoming economically more important in American households.

Lewis,[1] Jellinek,[2] McCracken,[3] Geiger, Meyer and Dickson[4] and Geiger[5] have summarized the data available since 1899. It may be of interest again to summarize the data to date (1926), going back, however, to the extensive report of Geiger, Meyer and Dickson, which indicates a total of ninety-one single or group outbreaks reported in the United States and Canada. A total of 345 cases with 213 deaths, or a case mortality of 61.7, was recorded. Only thirty outbreaks of their collected series were proved bacteriologically or toxicologically.

Since the publication, in September, 1922, of the report by Geiger, Meyer and Dickson, it has been possible to collect data in the United States dealing with fifty-six additional outbreaks, twenty-four of which have been proved toxicologically. There is included, however, in this series for statistical purposes one outbreak, which occurred in Scotland in October, 1922, from commercially canned duck paste, in which there were eight cases and eight deaths. Of the fifty-six outbreaks concerning which information is now available, twenty-one occurred in 1922, twelve in 1923, eight in 1924, eight in 1925 and the remainder in previous years. A total of 159 cases with 124 deaths, or a case mortality of 78 per cent, has been recorded.

If there is taken an eight-year period, 1918 to 1925, inclusive, an average of approximately thirteen outbreaks has occurred annually. This probably represents the average yearly occurrence of botulism in the United States. The number of outbreaks occurring in 1922 (twenty-one) was the largest number reported in any one year. It must be recognized, however, that food may be somewhat detoxified by heating or warming up just before being consumed, and the strength of the toxin so reduced that the mild cases resulting may be overlooked or not diagnosed as botulism.

To summarize, there have been reported in the United States and Canada from 1899 to date, and including one outbreak from England, 147 outbreaks, or a total of 504 cases with 337 deaths, giving a case mortality of 67 per cent; fifty-four outbreaks have been proved toxicologically and bacteriologically.

FOOD INVOLVED

The preserved food products concerned, so far as known, were: vegetables, in thirty-eight outbreaks; meat, four; fish, four; fruits, one; pickles, one, and the remainder, unknown. In thirty-six outbreaks the food was home canned and in eleven, commercially canned. The variety and type of preservation of causative food in these outbreaks is given in the accompanying table. Of the remainder the causative foods are unknown, with the exception of an outbreak that occurred at Longmont, Colo. Two foods were suspected, commercially canned spinach and home canned corn. A careful and critical survey of the epidemiologic evidence points to home canned corn, rather than to the commercially canned spinach. There are reported, however, conflicting toxicologic findings in a recovered empty can of spinach of the pack suspected. In addition, data are available as to five outbreaks in chickens, but only one was proved toxicologically. The causative foods were home canned asparagus, home canned corn (two), home canned string beans and home canned meat.

Food Responsible for Outbreaks

Home canned string beans	19
Home canned corn	6
Home canned asparagus	2
Home canned spinach	2
Home canned chile sauce	1
Home canned pimento	1
Home canned beef	1
Home canned figs	1
Home canned chicken	1
Home canned mixed pickles	1
Home canned salmon	1
Commercially canned olives	3
Commercially canned spinach	2
Commercially canned sardines	2
Commercially canned clam juice	1
Commercially canned duck paste	1
Commercially canned peas	1
Commercially canned meat	1

SPOILAGE

In the majority of outbreaks of botulism, the preserved foods responsible have been noted to be visibly spoiled. This spoilage may be a relative matter, as the containers can be normal in appearance and the disintegration of the contents so slight that no abnormal odor or taste is detected. Spoilage as to odor and appearance is, therefore, a decidedly doubtful criterion in botulism.

In the fifty-six outbreaks of botulism recorded in this study, information as to spoilage is available in forty-one. Eighteen of the foods implicated were stated to be normal in odor and taste and there was nothing unusual in the appearance of the container. In the remainder, twenty-three, the preserved food and its containers appeared abnormal, though it was tasted and served as food.

6. Rogers, L.: Fever in the Tropics, Ed. 3, Oxford University Press, 1919, pp. 1-55. Leishman, W. B., Allbutt and Rolleston: In System of Medicine, Ed. 2, London, Macmillan & Co., Ltd., 1911, pp. 226-240. Cummins, S. L.: The Oxford Medicine, Ed. 5, Oxford University Press, 1921, pp. 861-882.
1. Lewis: South. Calif. Pract. 14: 464, 1899.
2. Jellinek: California State J. Med. 3: 131, 1902.
3. McCracken: The Leucocyte, Detroit, 1912.
4. Geiger, Meyer and Dickson: Pub. Health Bull. 127, September, 1922.
5. Geiger, J. C.: The Status of Bacterial Food Poisoning in the United States, Am. J. Pub. Health 14: 309 (April) 1924.

TYPE OF TOXIN

Epidemiologically, the symptoms of botulism are due to preformed toxins in the food when the food is ingested. The type of toxin present has an important bearing, should treatment with antitoxin be instituted. In the outbreaks included in this series, information is available as to type in twenty-four. Of these, twenty were type A and four were type B.

GEOGRAPHIC DISTRIBUTION

Forty-six outbreaks occurred in the West, seven in the Middle West, and three in the East. None were reported from the Southern states.

Of the seven outbreaks reported in the Middle West, in four the food was canned in the West.

COMMENT

There are several matters of interest; mainly, the proved involvement of foods (sardines, meat and peas) which heretofore have not been noted in the United States. These outbreaks are of prime importance, as they focused attention on these particular foods and their type and method of handling and preservation. Two of these outbreaks were due to sardines of a like brand, mixed with tomato sauce. The product was canned in the West. One outbreak was due to commercially canned potted meat that was canned in the Middle West. The other outbreak was attributed to commercially canned peas that were canned in the Middle West. It is of interest to note that in the commercially canned peas and commercially canned potted meat, both canned in the Middle West, the type of toxin demonstrated was type B.

THE TECHNIC OF MEDICATION

A SERIES OF ARTICLES ON THE METHODS OF PRESCRIBING AND PREPARING, THE INDICATIONS FOR, AND THE USES OF VARIOUS MEDICAMENTS *

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CHICAGO

(Continued from page 417)

LOCAL APPLICATIONS TO MUCOUS MEMBRANES

IN GENERAL

Applications to mucous membranes have to deal with water-soaked surfaces of great absorbing capacity for aqueous solutions, but insusceptible of penetration by oily liquids, unless these are volatile. Hence, as a general proposition—to which there are exceptions—aqueous rather than oily liquids are used as applications to mucous membranes because these membranes shed oil as the skin sheds water.

As living cells cover mucous membranes, agents that would be tolerated without detriment by the dead, horny surface of the skin may kill or severely injure mucous membranes. The various membranes differ among themselves in sensitiveness. The following general rule might be of some help to beginners, though it has many exceptions, chief among which is the nature of the medicament. The strength of lotions may, in general, be 1 per cent. This strength may be doubled for applications to the mouth or the vagina, while from one fifth to one tenth should be used for such delicate membranes as those of the eye or the urethra. Of course, the nature of the drug and the effect required may upset this rough rule. Eye drops are often employed in greater strength: from 0.5 to 1 per cent of atropine sulphate; from 2 to 4 per cent of cocaine hydrochloride. The condition of the disease further modifies this rule. For acute conditions, more dilute solutions are used; for chronic disease, stronger solutions may be required.

Unless osmotherapeutic effects are wanted, isotonicity is desirable for the more delicate membranes. As is well known, a 0.9 per cent solution of sodium chloride is isotonic with blood serum. It is less well known that it requires a 1.4 per cent solution of sodium chloride to be isotonic with tears; hence such a solution would be best for use in the eye, though 0.9 per cent solution is acceptable. In the mouth and throat isotonicity may be disregarded, as these membranes habitually deal with plain water.

As applications to mucous membranes are rapidly washed away by the natural secretions or absorbed into the blood, frequent application—hourly or even oftener—is required if anything like continuous action is desired.

The temperature of applications should be warm (from 95 to 100 F.), about body temperature, unless thermic effects are aimed at. Hot solutions increase the determination of blood to the part, which may or may not be desirable. Cold solutions also produce hyperemia, after a preliminary stage of vasoconstriction.

Owing to the fact that mucous membranes are actively absorbent, it is necessary to guard against systemic poisoning from absorption of highly active medicaments.

EYE MEDICATION

The conjunctiva is one of the most accessible as well as most sensitive of mucous membranes. Only mild applications are permissible as general applications to the conjunctival sac, though a strong medicament is sometimes painted on for strictly localized action.

Lotions are the most common form of eye medication, and instillation of a few drops by means of a glass pipet with a small rubber bulb (eye dropper) is their most common mode of application. Such solutions are known as collyria; popularly, "eye drops." The conjunctival sac may still more efficiently be flushed with large quantities of fluid (irrigation). The solution may also be kept applied over the eyelids by means of compresses.

In the use of collyria, the patient throws his head backward, the lower lid is gently drawn down, and the solution is dropped into the lower culdesac of the conjunctiva, while the patient turns his eye upward. Not more than one or two drops should be deposited on the conjunctiva of the lower lid at a time, touching the membrane with the pipet being carefully avoided. Then the eye is permitted to close gently, and the patient given a moist pledget of cotton to apply to the closed lid.

In the use of eye lotions, the temperature of the fluid is of importance; it should be at or slightly above the body temperature, unless special effects by heat or cold are aimed at. Hot solutions act more energetically than cold liquids. As a precaution against the constitutional effects of drugs, such as the mydriatics, not only should not more than one or two drops be used at a time, but it is also of advantage to press over the

* This is the seventh of a series of articles on "The Technic of Medication." When completed the articles will be assembled in book form.

openings of the lacrimal canal for a few minutes to prevent passage of the fluid into the more actively absorbent nasal cavity.

Eye lotions should in general be isotonic with the tears as represented by a solution of 1.4 per cent sodium chloride. A 2 per cent solution of boric acid (half the strength of a saturated solution) requires no addition, being practically isotonic, a fact that probably accounts for the popularity of boric acid as an eye lotion. The osmotic tension of a 1:1,000 solution of zinc sulphate is so low as to require practically the same amount of sodium chloride or of boric acid. Such a solution is popularly used in the treatment of acute conjunctivitis. To silver nitrate solution, sodium nitrate would of course be added, as sodium chloride is incompatible with it. A 1 per cent solution of cocaine hydrochloride is equivalent in osmotic effect to a 0.2 per cent solution of sodium chloride.[22] If one, therefore, multiplies the percentage of the alkaloidal solution by 0.2 and subtracts the result from 1.4, the required percentage of sodium chloride is obtained. This method is also approximately correct for other alkaloids used in eye work, such as atropine or physostigmine.

Alcoholic solutions, unless highly diluted, would be irritating to the eyes. Oil solutions do not spread well over the water soaked surface and may speedily be thrown off from it. Still, homatropine or cocaine is sometimes employed in oil solution with the idea of securing slower and more prolonged effect.

Eye drops must be free from insoluble particles, and should be sterile. It is most practical to keep them in small bottles with a pipet stopper.

Eye baths are administered by means of a suitably shaped cup. The eye cup, filled with the medicament, such as warm 3 per cent solution of boric acid, is applied to the region of the eye while the head is inclined downward; then the head is bent backward and the eye is opened. After the solution has been permitted to act for a few minutes, the head is again brought downward and the cup removed.

Eye irrigations (eye douches) are best administered by means of a suitable modification of the eye cup with inflow and outflow attachment, but may be given efficiently even from an ordinary irrigator or fountain syringe. Such irrigation frequently repeated—every hour or so—is of the greatest possible value in the treatment of gonococcus opthalmia neonatorum, for which purpose the infant, whose well eye is protected by a watch crystal fastened with adhesive plaster, may be laid head down on the drain board of an ordinary kitchen sink. Low pressure and scrupulous avoidance of the least traumatism are of course indispensable in such irrigations, and employment of the proper temperature is even more important with eye irrigations than with eye drops. In irrigation treatment of gonorrheal ophthalmia, cool solutions seem to be preferred.

Eye compresses are contraindicated in infectious conditions of the conjunctiva, as the closure of the eyelids produced by them converts the conjunctiva practically into a closed sac, which favors the retention of secretions and the growth of micro-organisms. The opening and closing of the eyelids, together with the secretion of tears, are too valuable for the cleansing of the conjunctiva in these conditions to be interfered with by an application. Moist applications are also contraindicated in eczema of the eyelids, as in eczema of other parts of the skin. On the other hand, moist compresses are useful in the treatment of inflammatory processes of the eyelids (such as hordeolum), in dacryocystitis, and for the relief of the pains of iritis.

For moistening such compresses, 3 per cent boric acid solution, 1:3,000 mercuric chloride solution or 1:10,000 mercuric oxycyanide (N. N. R.) may be employed. To prevent maceration of the eyelids it is well to apply an indifferent ointment, such as petrolatum, to the lids. The moist compress is covered by waterproof material, and a roll of bandage is applied.

Stronger solutions may be painted on the tarsal conjunctiva than would be used as eye drops or irrigations. For instance, in trachoma and in gonorrheal ophthalmia, from 1 to 2 per cent solutions of silver nitrate are applied by means of a cotton wrapped applicator to the everted eyelids, while the patient is asked to close the lids firmly. This everts the eyelid still better and at the same time protects the cornea against the solution. Immediately after the application, the part is irrigated with physiologic solution of sodium chloride.

Minute gelatin disks medicated with definite quantities of potent drugs, such as atropine or physostigmine, are occasionally used in the eye instead of aqueous solutions. Their chief advantage lies in their portability and in the fact that, by their slow solution, the drug is maintained more continuously in contact with the conjunctiva than it would be were it applied in aqueous solution. The disk is applied by placing it against the conjunctiva by means of a moistened camel's hair brush or cotton applicator.

Eye salves are intended sometimes for application to the margin of the eyelids, sometimes for the eye itself. A simple ointment such as petrolatum or cold cream should always be applied to the margin of the eyelids of discharging eyes to prevent the sticking together of the eyelashes over night, which impedes drainage, thus permitting the extension of infection. Salves are applied by pulling down the lower eyelid by downward pressure on the cheek and applying the ointment to the margin of the lower lid by means of an applicator. As an example of such salves may be mentioned the ointment of yellow mercuric oxide, which is popularly used for prevention of recurrence of styes. This ointment, which is in the new U. S. Pharmacopeia of 1 per cent strength—it was formerly of 10 per cent strength and had to be diluted—is most conveniently dispensed in collapsible tubes with a small blunt point tip suitable for direct application to the eyelid margin.

Ointments may be preferred to aqueous solutions in the treatment of chronic processes of the conjunctiva in which a mere prolonged action is desired. As absorption and penetration are slower from ointments than from solutions, higher concentrations of medicament may be used in the former than in the latter, as 7:1,000 zinc sulphate. When the eye itself is to be treated by salve, the lower lid is pulled down and the salve applied to the conjunctiva of the lower lid, which is then permitted to close. Gentle massage may now be applied to the lids to distribute the ointment more generally over the conjunctiva. It is well to call the patient's attention to the fact that this application is followed for a short time by impaired vision, owing to irregular refraction of light rays by the salve covering the cornea. Salve compresses, obtained by thickly applying boric acid (3 per cent) petrolatum to the pledget of gauze laid over the eye, are useful

22. Knight, W. A.: Chemist and Druggist, Jan. 13, 1923, p. 59.

to protect the eye in insufficient closure of the eyelids (lagophthalmos) and in facial paralysis.

NOSE MEDICATION

The nasal mucous membrane is rather difficult of thorough access and also very sensitive. Only a gas can pervade the complicated passage in its entire extent. Chlorine is employed for this purpose (to be discussed in detail subsequently). Snuffing up powders or fluids is a very imperfect method, and snuffs are not as popular now as they were in days of old. Powders are better blown into the nose by means of powder insufflators; though, even then, they are probably of little use in diffuse nasal affections. Applications made under direct inspection will reach portions of the nasal mucosa inaccessible to drops.

Nose drops, generally antiseptic or astringent aqueous solutions, are instilled into the nasal passage by means of a medicine dropper. After instillation of the drops, lowering the head between the knees when the patient is sitting helps the medication to reach portions of the upper nasal passages. The popular 10 per cent solution of mild silver protein or one of its modern colorless succedanea like neosilvol or lunosol is an example of these. Nasal lotions (collunaria) are more dilute aqueous solutions poured into the nose from the palm of the hand or a teaspoon, while the head is thrown back, or, better, by means of a little nasal douche apparatus with inflow and outflow arrangement devised for this purpose.

In the prescribing of nasal lotions, pleasantness of flavor should be aimed at: for the solution invades the very citadel of olfaction. Thus, any one who had the choice between Compound Solution of Sodium Borate, N. F. (Dobell's solution), and the Alkaline Aromatic Solution, N. F.[23] would prefer the latter to the former. The two solutions are almost equivalent in borate and bicarbonate (1.5 to 2 per cent). Dobell's solution is flavored with 0.3 per cent phenol—one could hardly say medicated, there is so little of it—while the alkaline aromatic solution is flavored with methyl salicylate (wintergreen), eucalyptol and thymol, and colored a pleasing red by cudbear. Sollmann, in facetiously dubbing this solution a "psychic" antiseptic, has applied an appropriate term. It is popular because of its psychic, its esthetic, qualities. This solution, mixed with an equal amount of warm water, forms an eligible detergent lotion for the nasal mucosa.

Nasal irrigation with large quantities of fluid under pressure of the douche bag is more thorough in its action but also more dangerous than nasal douching. When fluid is injected under pressure, the solution escapes from the other nostril, owing to the fact that the palate rises so as to shut off the nasopharynx from the pharynx, and thus the stream is directed out of the opposite nostril. There is danger from such injections that the fluid may enter the eustachian tube, and through it the middle ear, which is liable to become infected in consequence. Hence, the patient must be cautioned not to attempt swallowing or speaking, lest these acts open the eustachian tube; and care should be taken to give the irrigation at the lowest possible pressure. The use of a small caliber hard rubber tube which has perforations along its wall and is passed along the floor of the nose, as suggested by Freer, adds to the safety of the procedure. Such irrigations are chiefly indicated in ozena. For nasal irrigation, approximately isotonic solutions only should be employed; and these, as they are needed in quantity, are most economically prepared by the patient himself—from one-fourth to one-half teaspoonful of either sodium chloride, sodium bicarbonate or borax to 250 cc. (a tumblerful) of water. The patient should be given the following special directions: The solution must always be used at about body temperature (100 F.); never cold. It should be introduced through the narrower side of the nose so that outflow may be easier than inflow. The fluid should enter horizontally and not vertically; otherwise, headache might result. That the fluid pass more readily out of the other nostril, the head should be slightly inclined forward, the escaping fluid being caught by a basin held under the chin. During the irrigation swallowing must be avoided, the patient breathing through the mouth. If swallowing is unavoidable, the irrigation must be stopped instantly. After the irrigation, blowing the nose should be avoided until after excess of fluid has escaped from the nose; and then, as always when blowing the nose, only one side compressed at a time.

Lotions should be used only when there is something to wash away, and even then the treatment had better be finished with an oil spray, because a lotion tends to remove the protecting layer of mucus and thus leaves the membrane in a condition easily irritated by very cold or very dry air. Therefore a film of oil or other demulcent should be applied after the use of a lotion in the nose. By "spray" we understand a liquid blown into minute particles by means of a strong current of air or of steam. Though not as effectual for cleansing as are douches or irrigations, sprays are safer; and, for other actions, often superior. For medicating the nasopharynx, a long straight tip is attached to the spray apparatus and passed horizontally through the lower meatus of the nose. The further discussion of sprays will be taken up under "Medication of the Respiratory Air Current."

For more prolonged localized application of medicaments to the nasal membrane, pigments, ointments or properly shaped suppositories may be used. A tampon (which is nothing more or less than a compress placed in a cavity) of lamb's wool, a tuft of it about an inch long, lightly folded end first inserted into the nose, is more likely to be useful for filtering the air in hay-fever than for medication. By reason of the sensitiveness of the nose, nasal tampons are not very popular, excepting perhaps in the treatment of epistaxis and ozena. Strictly localized affections are best treated by painting the involved area with the appropriate medicament. A good example of this is the efficiency in epistaxis of cauterization of the bleeding point, which is most commonly found on the cartilaginous septum near the apex of the opening of the nostril (Kieselbach's point). A small crystal of chromic acid or of silver nitrate does the work, preferably applied after touching the part with a mixture of equal parts of solution of epinephrine hydrochloride and of the solution of procaine hydrochloride of the National Formulary. The former is the 1:1,000 solution, now official in the U. S. Pharmacopeia. The solution of procaine hydrochloride contains 2 per cent of procaine hydrochloride (first introduced as "novocaine") in physiologic sodium chloride solution, preserved by means of thymol. Chromic acid applications should be neutralized immediately by touching the cauterized area with sodium bicarbonate solution.

(To be continued)

23. It is because no antiseptic action, excepting as to cleansing, can be expected from it that the name of the "Alkaline Antiseptic Solution" of the N. F. IV has been changed to "Alkaline Aromatic Solution."

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SATURDAY, FEBRUARY 13, 1926

THE RECENT INCREASE IN PULMONARY CANCER

Medical literature has exhibited recently an unusually large number of articles on cancer of the lung, which, apparently without exception, comment on the increased frequency of the condition. Not so long ago primary cancer of the lung was looked on as a rarity, and as late as 1912 Adler,[1] in a monographic study, was able to collect reports of only 374 cases. The number of cases that have been reported since that time is so great as almost to defy enumeration, and now lung cancer is recognized in many places not as a rare but as a common form of neoplasm. While the necropsy records of many laboratories show that from 3 to 5 per cent of all cancers arise in the lungs and bronchi, in some places 10 per cent or more of the cases of cancer seen post mortem are pulmonary carcinomas. According to Kikuth,[2] lung cancers rank second among the visceral neoplasms in the Hamburg necropsy records, being one third as common as cancer of the stomach. There seems, therefore, to be no doubt that this increase is actual. Of course, part of it is to be explained by an increased frequency of clinical diagnoses of primary lung cancer made by use of the roentgen ray, leading to particular effort to secure confirmation of diagnosis through postmortem examination. But when necropsy statistics are investigated in European communities where a relatively large proportion of all deaths are followed by anatomic study, it is found that the increase is far too great to be explained by improvements in clinical diagnosis. For example, in Basel, where postmortem examinations are numerous, Staehelin[3] found an increase from 1.76 per cent of lung cancer among all cases of cancer, before 1906, to 5 per cent of all cases in the period from 1912 to 1924. In Jena, where it is said that a majority of all deaths are followed by postmortem examination, a rise from 2.2 per cent in the period of 1910-1914 to 8.3 per cent in the 1920-1924 period is reported by Berblinger.[4] The figures in Leipzig are said to have risen to more than 10 per cent in the same period, and in the first half of 1924 no less than 15.5 per cent of all carcinomas were found to be primary in the lung. In Hamburg before 1895 less than 1 per cent of the cancers seen at the necropsies arose in the lung, but since then the proportion has risen steadily to 9.4 per cent. It will be noted that this change is in no way dependent on any alteration in the total or relative cancer death rate, since these figures are based entirely on the proportion of lung cancers among all cancers found in dead bodies. In this country a similar increase has been noted in the small necropsy statistics at our disposal, and has been discussed by several writers, including Moise,[5] Barron[6] and Fried.[7]

Why should there be such a distinct increase in frequency of lung cancer? Presumably, since cancer is commonly the sequel of chronic irritation, some change of this sort is responsible. The classical, if perhaps not altogether convincingly demonstrated, frequency of lung cancer in the Schneeberg miners of ores containing arsenic and cobalt supports the idea that lung cancers are no exception to the rule that irritation precedes cancer. It therefore is not surprising that the increased smoking of cigarets, with inhalation of the smoke, in contrast to the former more prevalent practice of pipe and cigar smoking without inhalation, comes up for consideration. There are no reliable statistics to permit the evaluation of this factor, although in its favor is the large excess of males among the victims of lung cancer; but this discrepancy is also exhibited by other cancers not in the range of cigaret smoke. Irritation by dust can hardly explain the change, for, in the first place, no such augmentation of our civic dustiness has taken place, and, secondly, dusty trades as a rule show no abnormally high lung cancer rate. Nevertheless, Hampeln has supported this contention by maintaining that there is no increase in pulmonary cancer in Oslo, because of its immaculateness. Of more probable significance is the influence of influenza, for to a large extent the augmentation of lung cancer has followed the great epidemic of 1918. This is made especially likely by the fact that the pathologic changes seen in the lung are of a character that suggest precancerous epithelial proliferations, as was pointed out by Askanazy and Winternitz, among others. The latter called attention to the similarity of the changes to those produced in the lungs by chemical irritants,

1. Adler, I.: Primary Malignant Growths of the Lungs and Bronchi, New York, Longmans, Green & Co., 1912.
2. Kikuth, W.: Ueber Lungencarcinom, Virchows Arch. f. path. Anat. **255**: 107, 1925.
3. Staehelin, R.: Ueber die Zunahme des primären Lungenkrebses, Klin. Wchnschr. **4**: 1853 (Sept. 24) 1925.
4. Berblinger, W.: Die Zunahme des primären Lungenkrebses in den Jahren 1920-1924, Klin. Wchnschr. **4**: 913 (May 7) 1925.
5. Moise, T. S.: Primary Carcinoma of the Lungs, Arch. Int. Med. **28**: 733 (Dec.) 1921.
6. Barron, Moses: Carcinoma of Lung, Arch. Surg. **4**: 624 (May) 1922.
7. Fried, B. M.: Primary Carcinoma of Lungs, Arch. Int. Med. **35**: 1 (Jan.) 1925.

and suggested the possibility that an increased frequency of lung cancer might be expected to follow the influenza epidemic. Certainly an increase has come, and numerous authors have accepted the influenza epidemic as the most probable explanation, among them Berblinger. However, the clinical records in a large proportion of the investigated cases have not shown any history of influenza, and Staehelin points out that in many statistics the rise of the lung cancer curve began a few years before the influenza epidemic. He suggests that the increased practice of tarring the roads and streets may be the explanation, having in mind the experimental and clinical observations on the production of cancer with tar. He points out that Möller painted rats on the skin of the back with tar, and observed in six of his animals not skin cancer as expected but cancer of the lungs; and that Kimura produced lung cancers in rabbits and guinea-pigs by insufflating tar through a tracheotomy wound. These observations are suggestive, but good statistical evidence is lacking that the frequency of lung cancer varies greatly among populations in districts with tarred or untarred streets; in fact, there is some evidence to the contrary. In view of what is now known, we can only conclude that, although there is undoubtedly a marked increase in the frequency of primary cancer of the lung, the reason for it is not yet established, but the possibility that it is a sequel of the influenza epidemic seems strong. If so, an abatement of the curve should soon be observed. In any event, there seems to be no evidence that it is a consequence of the use of war gases, as has been suggested, for few indeed of the victims of lung cancer have ever been exposed to this source of pulmonary injury. The possibility remains, however, that the increased inhalation of irritating gases from automobiles, imperfect fuel combustion, and industrial processes may be factors of importance.

"SANOCRYSIN" AGAIN

In spite of the disappointing results from the use of "Sanocrysin" in animal tuberculosis in the careful experiments carried out for the Hygienic Laboratory by Drs. Theobald Smith, William H. Park and E. C. Schroeder, it is possible that some renewal of interest may arise as a result of recent papers by European[1] physicians on the use of sodium-gold thiosulphate in human cases of tuberculosis. One naturally views with doubt the value of these reports, since these physicians have discarded the theories of the original presentation and, to a large extent also, the use of antitoxic serum. They thus place the substance in the category of the gold salts used in the therapy of tuberculosis, with which a long record of varied experiences is available.

The tendency to study the influence of therapeutic agents on human diseases is followed more widely in European countries than is now the custom in the United States. In this country, when it is possible to study a disease in animals, the preference is to make sure that good results follow attempts to cure in animals before giving the drug to patients. This is especially true of tuberculosis, for which so many cures are urged.

Tuberculosis can now be produced and followed, even in its mildest form, in different animals, and occurs as a spontaneous disease in many species; naturally, there should be some assurance of the value of a drug in animals before human experiments are justified. This position is more logical as sanatorium and home treatment, under strict supervision, has given such excellent results in the treatment of tuberculosis that a suggested cure must offer much better results before we should give it up. But there are always cases in which failure attends the best efforts, and it is in these that hope leads to trial of other things, among them gold in the form of "Sanocrysin." Every trial in the past with gold has failed, but the hope still continues that it may be curative.

Recent clinical reports draw a parallel between gold and arsphenamine. The use of gold salts in the treatment of tuberculosis always involves a risk of serious injury to the patient's tissues. The kidney lesions and the dermatitis that have been noted as a result of gold therapy are similar in all essential respects to those produced by mercury and the arsenicals.

With regard to the action of gold salts (including "Sanocrysin") on pathogenic organisms in the test tube, it is true that they appear to act in the same manner as arsphenamine on spirochetes in the body. But no conclusive proof has been furnished that either of these two substances has any action whatever on tubercle bacilli in the body. It would be a mistake to infer from the potency of gold salts in the test tube and of arsphenamine in syphilitic infection that these drugs exercise therapeutic action in tuberculosis. The spirochetes are extracellular organisms, presumably more easily reached by drugs, whereas tubercle bacilli, in the main, are intracellular and therefore less accessible. Tuberculosis and tuberculin reactions produce lesions of the same structures of the kidney as do the heavy metals, and thus there may be a summation of serious effect following the use of gold in the tuberculous animal.

It is possible that the use of gold may have some value, but there is no evidence for this at hand today and the wisdom of American physicians in awaiting definite proof of action in animal tuberculosis before using it in the human disease will save much suffering and distress.

1. Faber, K.: Klin. Wchnschr. **4**: 2429, 1925. Elliott, T. R.: Lancet **1**: 126 (Jan. 16) 1926. Würtzen, C. H.: Wien. klin. Wchnschr. **38**: 1373, 1925.

TOLERANCE TO ALCOHOL

The susceptibility of different persons to a drug sometimes shows marked variations; occasionally the same individual exhibits variations in sensitiveness at different periods, owing to changes in his physiologic condition or to other factors that cannot be evaluated. Such inequalities in susceptibility are by no means identical, however, with what is commonly described in pharmacologic circles as tolerance. The latter is acquired through continued use of the drug, so that an habitual consumer is often able to take without conspicuous characteristic effects quantities that would lead to untoward results in unaccustomed persons. This is notably true of opium and its derivatives; it is likewise familiar in connection with alcohol. Instances are recorded in which steady drinkers have been in the habit of taking alcohol in daily doses exceeding 10 cc. per kilogram of body weight; that is to say, for an adult, no less than 23 ounces of absolute alcohol, or well over 2 pints of whisky at proof, "more than enough to kill a neophyte." [1]

More dependable information regarding the underlying physiologic features of tolerance, and likewise of addiction, is obviously desirable. In the case of alcohol, the evidence remains uncertain. Two possible explanations have predominated. Tolerance conceivably depends on an increased resistance of the body cells to alcohol, an augmented capacity of the organism to dispose of alcohol by oxidation, or both. If there is an increased disposal of the substance, it may be expected that after a given dose the amount present in the blood would not rise to the same level in an habitual drinker as it would reach in the case of a person who had not acquired tolerance. An instance compatible with such an interpretation has lately been described by Hansen of Oslo,[2] in confirmation of earlier indications.[3] Of course, this does not gainsay the possibility of simultaneous increases in cellular immunity against alcohol. According to Pringsheim,[4] a tolerant animal may show few or no signs of intoxication even when its blood contains enough alcohol to cause well marked symptoms in an unaccustomed animal. It is possible, therefore, that when tolerance has become established, either the access of alcohol to the nervous centers is in some way impeded, or, as is more likely, the nerve cells react less readily to its presence.

According to the English students of alcoholism,[1] it seems likely that while the nerve cells of the habitual drinker become tolerant to the presence of alcohol, other body cells are less able to accommodate themselves to it, with the result that they are liable to be injuriously affected, if the development of tolerance in the nervous system leads, as it naturally tends to lead, to the taking of larger doses of the drug. That is advanced as a reason why drinkers who have, as they would say, strong heads for liquor and who can consume a great deal of alcohol without becoming drunk, are likely to suffer in the long run from some of those bodily disorders characteristic of chronic alcoholism. On the other hand, people who are especially susceptible to the intoxicating action of alcohol are to a great extent protected from excess by that very fact. Just because they are so easily made drunk, they escape the more serious evils of chronic poisoning. Hence, the English writers believe, from the point of view of general health, the acquisition of tolerance really implies the removal of a protective mechanism—it allows the drinker to use the drug in doses which he could not have taken if his brain cells had retained their normal power of reacting to it.

1. Alcohol: Its Action on the Human Organism, London, H. M. Stationery Office, 1918.
2. Hansen, K.: Experimentelle Untersuchungen über Gewöhnung an Alkohol bei Menschen, Biochem. Ztschr. **160**: 291 (July) 1925.
3. Schweisheimer, W.: Deutsch. Arch. f. klin. Med. **109**: 271, 1913; Inaug. Diss., München-Leipzig, 1913. Gabbe, E.: Deutsch. Arch. f. klin. Med. **122**: 81, 1917.
4. Pringsheim, J.: Biochem. Ztschr. **12**: 143, 1908.

Current Comment

PHYSIOLOGIC ASPECTS OF GLARE

Glare is a conspicuous manifestation of our period: the glare of the footlights, the glare of the headlights, and the glare of the great white ways. Since the advent of the automobile, glare has become a subject of legislative enactments. It has been defined as "a brightness within the field of view of such an excessive character as to cause discomfort or interference with vision." [1] Evidently the physiologic aspects of the subject need to be considered more critically, as has recently been attempted by Nowakowski [2] at the School of Hygiene and Public Health at Johns Hopkins University. He has discovered that glare is a condition of visual discomfort which is dependent on two factors, both due to contrasts of illumination on the retina. One is attributable to the failure of the eye to adapt itself to a stimulus of small area and high intensity, in consequence of which there is irritation of the hypersensitive retina. The contrast between the glare spot and the surrounding retina produces discomfort that is proportional to the intrinsic brilliancy of the glare light. The other factor is a depression of visual acuity when there is a sufficient contrast between the illumination of the glare spot and that of the fovea. The depression of central vision by peripheral glare has been experimentally measured by Nowakowski. Probably central glare gives a similar depression of peripheral vision. Visual disturbance, we are told, is proportional to candle power; local irritation, to intrinsic brilliancy; and discomfort, to a combination of the factors. It is possible, further, that oculomotor reflexes may be started by the overstimulation of the light-perceiving elements of the retina and thus add to the discomfort. These considerations have led to the abandonment of some of

1. Clark, J. H.: Lighting in Relation to Public Health, 1924.
2. Nowakowski, B. A.: The Measurement of Glare, Am. J. Hyg. **6**: 1 (Jan.) 1926

the older physiologic explanations of the phenomenon of glare. The diffraction of the lens is no longer held responsible for it. The hypothesis that the effect is due to a psychologic inhibition and the trouble therefore located in the central nervous system likewise seems untenable; for change in visual acuity produced by glare in one eye is without effect on the other, contrary to what would be expected if the nervous centers were concerned in the result. It is important to recognize clearly that the discomfort due to glare is actually attended with impaired efficiency of the eye.

CHIROPRACTIC NOT HARMLESS

A decision by the Supreme Court of Illinois [1] relating to chiropractic has brought out a new answer to the claims of chiropractors and practitioners of similar methods. The defendants in the case argued that practice of chiropractic was "a useful and harmless calling which cannot be regulated by the state." This claim was declared to be so entirely without merit that any discussion of it was unnecessary. The decision went on to state, however, that "if a chiropractor can, by manipulation, move a dislocated vertebra so that the pressure on a nerve can be relieved and paralysis cured, he can by the same process dislocate a vertebra and cause a paralyzed condition. Any method of treating human ailments which, when practiced skilfully, can restore a diseased human body to health is capable of doing great harm when practiced without care or skill. A method of treating human ailments cannot be both useful and harmless. If it is sufficiently efficacious to be useful, it is at the same time capable of producing harmful results." The chiropractor, no less than the physician or any one else who is to treat the sick, needs to have a sufficient training in the fundamentals of medicine so that he will know at least when his manipulation may be harmful.

PROGRESS OF STATE SOCIETY JOURNALS

In 1913, at the suggestion of the editors of several state medical journals, the work of the cooperative advertising bureau was begun. The cost of operating medical periodicals was proving almost prohibitive in some states. Others, in order to avoid financial loss, were being forced to accept advertising from the makers of doubtful preparations. At that time, many of the state journals were poorly printed on poor paper. Some were small, some large. A collection of them displayed not even the two-by-two uniformity of the passengers in Noah's Ark. It seemed to these editors that a central advertising bureau, located at the headquarters of the American Medical Association, could obtain advertising business not for one but for many journals. In this way, soliciting expense would be spared to the journals and greater circulation obtained for the advertisers. Furthermore, the close association of such a bureau with the Council on Pharmacy and Chemistry would result in printing only the advertising of manufacturers of ethical products, rather than that of any applicant who could pay for space. This year virtually marks the completion of the program set in operation in 1913. Thirty state journals are now members of the cooperative advertising bureau. Only one is not a member of it. These thirty journals are now appearing with a uniform six by nine inch type size of page. Many of them, with the current year, are adopting more attractive covers. All are being printed on good paper. One can turn the pages of almost all of them and never see an advertisement of which an ethical journal would be ashamed. They are solvent and unafraid. The efforts of the state societies, editors and managers since 1913 have had much to do with bringing about this better state of affairs. At the same time, a great deal of credit belongs to those who conceived the idea of the cooperative advertising bureau and to those who have directed its activities, whereby more and better business has been obtained at half the cost of the same volume of advertising if it were obtained through individual solicitors.

PHYSICIANS IN CONGRESS

The Congress of the United States is made up of ninety-six Senators and 435 members of the House of Representatives. About two thirds of these congressmen are lawyers or have had legal training. The remainder are mostly business men, farmers and publishers, with a sprinkling of educators and engineers. Only six are physicians, five of whom are members of the House. There are three dentists, two of whom are in the House. In previous Congresses the number of physicians has been slightly greater, though the profession has never been well represented at the capitol. The only physician in the Senate is Royal S. Copeland, democrat, New York, who was health commissioner of New York City. He has served as vice president of the American Public Health Association. The dentist in the Senate is Henrik Shipstead, Farmer-Labor, Minnesota. Two other Senators, Woodbridge N. Ferris, democrat, Michigan, and George H. Moses, republican, New Hampshire, studied medicine for brief periods. Three of the physicians in the House are republicans and two are democrats. Three were in active practice when elected, while one was engaged in farming; the other, who is also a lawyer, was specializing in legal medicine and the practice of law. Dr. E. M. Irwin, republican, Belleville, Ill., graduated from Missouri Medical College of St. Louis and practiced from 1892 until elected to the Sixty-Ninth Congress. Dr. Ladislas Lazaro, democrat, Washington, La., has been a member of the last seven Congresses. He was educated at Holy Cross College, New Orleans, and graduated in medicine in 1894, having been in active practice until 1913. Dr. John J. Kindred, democrat, Astoria, N. Y., studied medicine at the University of Virginia and Hospital College of Medicine of Louisville, Ky., from which he took his M.D. degree in 1889. He is also a law graduate and has lectured on medical jurisprudence and is especially interested in mental disease. He served in the Sixty-Second Congress and from the Sixty-Seventh to date. Dr. William T. Fitzgerald, republican, Greenville, Ohio,

1. People v. Walder (Ill.) 148 N. E. R. 287 (J. A. M. A. 86: 371 [Jan. 30] 1926).

graduated from Wooster University Medical School and practiced until elected to the Sixty-Ninth Congress. Dr. John W. Summers, republican, Walla Walla, Wash., engaged in the practice of medicine for twenty-five years after graduating from the Kentucky School of Medicine and the Louisville Medical College. He has been in Congress since the Sixty-Seventh Congress. The two dentists in the House are Dr. Roy O. Woodruff, republican, Bay City, Mich., and Dr. Frank Crowther, republican, Schenectady, N. Y. Both have served in a number of Congresses. Although these physicians and dentists are the only representatives of their professions in Congress, the biographic sketches of some other members, as given in the Congressional Directory, reveal an interest in public health and medical matters. Thus, Mr. Robert G. Houston, a lawyer, republican, Delaware, was a member of the first state antituberculosis commission and is now vice chairman of the commission for the feebleminded, while Representatives Louis A. Frothingham, Massachusetts, Ernest R. Ackerman, New Jersey, and John M. Morin, Pennsylvania, are trustees of various hospitals.

Association News

THE DALLAS SESSION

Barbecue for Doctors

Typical Texas entertainment is planned for the Annual Session of the American Medical Association, which will convene in Dallas, Texas, April 19-23. A barbecue tendered by Dr. John H. Dean for the 5,000 physicians, guests and exhibitors, totaling more than 10,000 visitors to the Lone-Star State, is an unusual feature planned for this occasion. Eminent physicians will witness carving under the supervision of Mr. Max Hahn, for forty years expert "barbecuer" of Dallas.

Last June, Dr. Dean selected eighty cows with calves about 6 weeks old out of a herd of 4,000. These cows were selected according to size, vigor and milk producing qualities, so as to insure a rapid, healthy growth for each calf. The eighty cows and calves were turned into a six-section pasture which had not been used, and which contained an abundance of fresh food and water, assuring the cattle of a properly selected, scientific diet. It is customary to wean calves from the mother after six months, but this plan was not followed with the calves to be used for the barbecue, in order that they might secure their mother's milk, so as to provide the best nourishment for rapid, healthful growth. A full diet was begun for the cattle in December. The calves will be killed in advance of the session and the meat prepared so as to be in the best condition for the barbecue. Mr. Tony Bazar, with a corps of able assistants, has been delegated to arrange for the service during the barbecue.

Family Physician as Educator.—If we are to guide people in the ways of health, if the community guards the health of its mothers, its babies, its school children, its industrial workers, the family doctor must become an educationist and in part a health administrator. If he does not, his rôle will suffer progressive diminution, curtailed as it will be on the one hand by the whole-time health official, and on the other hand by the invading specialist. This will, in my judgment, be a disadvantage to the community. The family doctor should remain the foundation of medical service, but his outlook, functions and training need modification to meet changing needs. First must come his care of the sick, but beyond that he will have communal and educational duties.—Dawson, L.: *Lancet* **1**:3 (Jan. 2) 1926.

Medical News

(PHYSICIANS WILL CONFER A FAVOR BY SENDING FOR THIS DEPARTMENT ITEMS OF NEWS OF MORE OR LESS GENERAL INTEREST: SUCH AS RELATE TO SOCIETY ACTIVITIES, NEW HOSPITALS, EDUCATION, PUBLIC HEALTH, ETC.)

CALIFORNIA

Surgical Association Meeting.—The Pacific Coast Surgical Association will meet at Del Monte, February 26-27, under the presidency of Dr. Charles D. Lockwood, Pasadena. Clinics will be held at San Francisco two days previous to the Del Monte meeting. Dr. Arthur Dean Bevan, Chicago, will be the guest of the association, and will speak on "Pathology, Diagnosis and Present Status of Surgical Treatment of Peptic Ulcer."

San Joaquin Health District.—Since the full-time health organization began to function in the San Joaquin health district, the death rate has dropped from 14.04 in 1923 to 12 per thousand in 1925, excluding deaths at Stockton State Hospital. Deaths from infectious diseases declined 25 per cent last year, although an epidemic of whooping cough in the spring caused the death of thirteen children. There were five deaths from typhoid last year and thirteen in 1924, one from diphtheria, as against ten in 1924, and one from scarlet fever, as against four in 1924. The infant mortality rate increased from 57 per thousand births in 1924 to 69.8 in 1925. The birth rate was 17.9 in 1925, a decided decrease from 19 in 1924.

Miscellaneous Items.—Dr. Warren F. Fox has been appointed health officer of Pasadena to succeed Dr. Frank W. Hodgdon, Jr.——During December, 1925, 1,364 children in Sacramento were immunized against diphtheria under the direction of the city health department.——The health officer of Los Angeles County has successfully prosecuted a physician in his district who has persistently failed to file birth certificates as required by law.——Dr. Harry F. Smith has been appointed health officer of the city of Piedmont to succeed Dr. Arthur Fibush.——The California Academy of Sciences recently sent supplies of top minnows (*Gambusia affinis*) to India, Philippine Islands and other places in the Far East, also to Papeete, Tahiti. The academy finds that these minnows multiply as rapidly under aquarium conditions in Golden Gate Park as they do in their native pools; the academy has therefore been able to supply from the Steinhart Aquarium colonies of minnows to many parts of the world.——Dr. Paul M. Ellwood has been appointed assistant epidemiologist of the state board of health. Dr. Ellwood, who is a graduate of Rush Medical College, Chicago, has just completed a course of training at the International Health Board Training Station, Andalusia, Ala.——The February 4 meeting of the Los Angeles County Medical Association was "military night"; the program was given over entirely to subjects pertaining to military medical organizations.——The Stanley P. Black Memorial Fund is endeavoring to provide for a lecture on medical and allied subjects two or three times a year by scientists of national reputation. The lectures will be similar in scope to the Lane lectures given by Stanford University Medical School. The Stanley P. Black Memorial Hall in the Professional Building, Pasadena, will be completed March 1, and Dr. Alfred S. Warthin, professor of pathology, University of Michigan Medical School, Ann Arbor, will inaugurate the series of lectures in March or April. The committee requests the support and interest of physicians in this project; checks may be mailed to the secretary, Dr. Leroy B. Sherry, 65 North Madison Avenue, Pasadena.

CONNECTICUT

Personal.—Dr. Thomas Eben Reeks, New Britain, superintendent, New Britain Hospital, has been elected president of the Connecticut Hospital Association.——Dr. Gertrude C. J. Kinsella is director of the city health department of New Britain.——Dr. Chester E. Haberlin has been appointed on the staff of the Emergency Hospital, Bridgeport.

Health Officer Appointed.—The new board of health of Meriden accepted the resignation of Dr. Joseph A. Cooke as health officer, January 25, and elected Dr. Howard De Forrest Lockwood as health officer, effective, March 1. Dr. Cooke's resignation had been "on the table" for about a year; Peter B. Brown, D.V.M., was appointed food and milk inspector by the board, and Dr. Michael J. Conroy was reappointed physician to the parochial schools.

Public Health Meeting.—Dr. Francis G. Blake, Yale University School of Medicine, New Haven, addressed the Connecticut Public Health Association at Bridgeport, February 11, on "Scarlet Fever," and Dr. Haven Emerson, Columbia University College of Physicians and Surgeons, New York, on "The Preventable Diseases of Adult Life." Dr. William H. Coon, health officer of Bridgeport, conducted a clinic on the diagnosis of scarlet fever.

DISTRICT OF COLUMBIA

Medical Society Honors Commissioner.—Hon. Frederick A. Fenning, commissioner of the District of Columbia, was unanimously elected an honorary member of the Medical Society of the District of Columbia, January 6. The by-laws provide for electing as honorary members any persons who, by reason of eminent contributions to medical or collateral science or of meritorious service to the medical profession, deserve recognition. Commissioner Fenning, a lawyer, has for years served the Medical Society of the District of Columbia as legal adviser and has always taken great interest in matters pertaining to public health and medicine.

FLORIDA

Smallpox at Tampa.—The smallpox outbreak at Tampa had amounted to 118 cases, January 29, of which forty-one were white persons; no deaths had resulted. Dr. Ernest C. Levy, city health officer, is reported to have said that about 41,000 persons had been vaccinated in the city since January 1, or slightly more than 50 per cent of the total population; he urges immediate vaccination of all persons not immune as the only way to check the disease permanently. "Even if we succeed in stamping out the disease now," he said, "we are certain to have new cases from time to time, because persons having smallpox will come to Tampa from other cities and expose those who have not been vaccinated."

Beauty Shops in Miami.—Among the fifty-two "beauty shops" in the city of Miami, only four were found conducted with sufficient regard to hygiene and decency to satisfy the department of public welfare. A place known as the Ar Bay Beauty Shop is said to have kept drinking water in the toilet room; the Cortez Beauty Shop, another institution which had many patrons had only one comb and brush; the towels in the Van de Grift Beauty Shop were simply dried and used again until they became too soiled to use; their sanitary cabinets were used for "catch alls"; a beauty shop at 290 Halycon Arcade had one powder puff for the use of everybody. The department of public welfare continues to say that combs, brushes and other "implements of the trade" were used time after time without cleansing or sterilization, and that most of these shops used common drinking cups; that part of their premises not supposed to be seen by patrons was littered and poorly kept.

GEORGIA

New State Health Director.—According to the Atlanta *Journal*, Dr. Millard E. Winchester, former health officer of Thomas County, has been appointed director of health for the state of Georgia. Dr. Winchester has been taking post-graduate work in Baltimore for several months, and is now observing health work in North Carolina and Virginia before taking up his new work in Atlanta.

Medical Arts Building.—A syndicate of physicians, dentists and business men of Atlanta have purchased a site on Peachtree Street, Atlanta, on which it is proposed to erect a $1,000,000, twelve story medical arts building for the use of physicians and dentists; about 75 per cent of the space in the building is said to have been rented already. It will provide business offices and laboratories, an auditorium, library and garage. Dr. Henry Clifford Sauls is president of the Medical Arts Building, Inc. Drs. Jay G. Williams and M. D. Huff, D.D.S., vice presidents; Dr. Grady E. Clay, secretary, and Dr. Hugh M. Lokey, treasurer.

ILLINOIS

Chiropractor Fined.—Miss M. E. Wagoner, a chiropractor at Newman, pleaded guilty, it is reported, to practicing without a license, January 16, and paid a fine of $100 and costs.

Society News.—Dr. Irving F. Stein, Chicago, addressed the January meeting of the Vermilion County Medical Society on "The Use of Radiography in Gynecology."——Dr. Henry B. Thomas has been elected president of the Chicago Orthopedic Club; Dr. Beveridge H. Moore, vice president, and Dr. Philip Lewin, secretary-treasurer.——Dr. John L. Tierney, St. Louis, addressed the Madison County Medical Society, February 5, at Edwardsville, on "Working Up a Case."

Surgeon General Appointed.—Dr. Harry D. Orr, Chicago, has been appointed surgeon general of the Illinois National Guard, to succeed the late Dr. George C. Amerson. Surgeon General Orr graduated from Northwestern Medical School, Chicago, in 1904, and has been associated with the Illinois National Guard since 1902. He was in command of the one hundred and eighth sanitary train, A. E. F., in France, which was attached to the third division; since the war, he has been in command of the medical regiment of the thirty-third division.

Chicago

Hospital News.—Dr. Karl L. Thorsgaard has been elected chief of staff at the American Hospital of Chicago; Dr. Gustav Kolischer, head of the department of urology and urologic surgery, and Dr. Thomas J. Williams, head of the department of ophthalmology and otolaryngology; Dr. Thomas A. Carter has been added to the attending staff.

William Beaumont Memorial Fund.—Dr. Frank Smithies has presented to the University of Illinois School of Medicine bonds in sufficient amount to yield annually, at a minimum and in perpetuity, the sum of $100, to be known as "The William Beaumont Memorial Fund," and the annual income therefrom, "The Annual Beaumont Memorial Award." Dr. Smithies' object is to stimulate research in the functioning of the digestive mechanism. The first award will be made in 1927 to the person, who, in the opinion of a faculty committee, submits or publishes during the year the most important work in the specified field.

Rules for Information Bureau.—The Chicago Medical Society has inaugurated a service for its members whereby physicians, who agree to accept calls through the Information Bureau, will be assigned to patients. The rules governing the information bureau were recommended by the council and approved by the branch societies. They are as follows:

The City of Chicago is to be divided into fifty wards and each subdivided separately. An alphabetical list of the members of the society in each ward is to be kept by the operator of the information bureau. Physicians who agree to accept calls through the bureau must specify whether or not they will accept night calls and Sunday calls, and must agree to take cases sent to them and promptly respond to the calls coming from the information bureau. The operator of the bureau is to ask the following questions in accepting calls:

Question 1. Ask whether the party already has a family physician; if they have, why wasn't he called?

Question 2. Are the people who are calling for a physician able to pay? If they ask what it costs, the fee schedule of the Chicago Medical Society is to prevail.

Question No. 3. The operator is to ask questions regarding sickness, nature of the case, etc., so that the physician responding to the call may have an idea what instruments to take with him, an idea as to what to be prepared for.

Question 4. Name, address, sex, color and age of the patient to be recorded by the operator.

In conclusion, when accepting the call, the operator will ask that no other physician be called so as to prevent the common occurrence of having several physicians respond to one call, which is especially true in emergency work.

When sending a doctor on a case, the operator will pick the first name on the alphabetical list from the ward from which the cases comes. A notation will then be made and the next call from the same ward will go to the second doctor on the list, and so on down the line.

INDIANA

Hospital News.—The cornerstone for the new $385,000 surgical unit at the City Hospital, Indianapolis, was laid with appropriate ceremonies, recently.

Personal.—Dr. Walter C. McFadden, Shelbyville, has been appointed secretary of the city board of health, and Dr. Franklin E. Ray, a member.——Dr. Frederick W. Mayer, Indianapolis, has been appointed health commissioner of Marion County.——Dr. Samuel McGaughey has been appointed physician to the jail, Indianapolis, to succeed Dr. S. Merrill Tilson.——Drs. Joseph E. Moser, Frank F. Tourner and Rodney D. Smith are new members of the board of health of Bloomington.——Dr. Francis M. Williams has recently been elected mayor of Anderson.——Drs. Thomas Z. Ball and Lloyd H. Davis are new members of the board of health of Crawfordsville.——Drs. Clint C. Sourwine, Harry Elliott and Fred C. Dilley have been appointed members of the board of health of Brazil.——Dr. Earle S. Green has been appointed health commissioner of Muncie.——Dr. Walter W. Heald, West Lebanon, has been appointed county health officer, to succeed Dr. Sheldon S. DeLancey, Williamsport, resigned.——Dr. Davis L. Field has been reappointed city health officer of Jeffersonville.——Dr. Frederick E. Jackson has been appointed a member of the Indianapolis Board of Health to succeed Dr. Arthur E. Guedel.

MICHIGAN

Licenses Revoked.—The secretary of the board of registration in medicine reports that the following licenses were revoked, Oct. 14, 1925: Dr. James Leslie Passmore, Detroit, charged with violation of the antinarcotic act; Dr. Arden N. Howe, Flint, charged with illegally disposing of a dead body.

Society News.—Dr. Charles E. Elsberg, professor of neurologic surgery, Columbia University College of Physicians and Surgeons, New York, will address the Wayne County Medical Society, February 15, on symptoms of tumors of the central nervous system of interest to the general practitioner, illustrated by lantern slides.

University News.—The faculty of the University of Michigan Medical School, Ann Arbor, recently passed a memorial resolution expressing deep regret over the loss to American medicine in the death of Dr. Albion W. Hewlett, San Francisco; Dr. Hewlett was professor of medicine and director of the clinical laboratories at Michigan from 1908 to 1916.

MISSISSIPPI

New Mental Hospital.—The lower house of the state legislature passed a bill, January 29, after a long debate, authorizing the abandonment of the state insane hospital at Jacksonville, and the building of a new $2,500,000 institution on the Rankin County convict farm, 8 miles from Jacksonville, and to be paid for from proceeds of the sale of the present property. The construction of the new project would be supervised by a commission comprising the governor, the superintendent of the hospital, and three other members to be named by the governor. The bill has not yet passed the senate.

NEBRASKA

Personal.—Dr. John P. Lord has been elected president of the Omaha Surgical Club.——Dr. M. Alace M. Kani has been elected president of the Omaha Medical Women's Society, suceeding Dr. Mattie L. Arthur.

State Society Record.—The highest membership ever attained (1,209) by the Nebraska State Medical Association was that of last year, and although the dues have been raised, the present year bids fair to exceed the 1925 record.

Chiropractor Fined.—Mrs. Caroline Bray, a chiropractor of Falls City, was tried, January 16, on a charge of practicing medicine without a license, found guilty, it is reported, and fined $100 and costs.——The department of public welfare recently filed a complaint against Paul R. Parrish, Salem, charging him with dispensing drugs without a pharmacist's license; Parrish, it is reported, pleaded guilty and was fined $10 and costs.

License Revoked.—It is reported that the license of Dr. Ora M. Caldwell, Omaha, has been ordered revoked by the department of public welfare, following a hearing on a charge of "unprofessional conduct." Dr. Caldwell is said to have traveled about the state, advertising in the papers, and to have held out to patients that she can cure manifestly incurable diseases.

Physician Founds Mission.—Dr. Harry M. McClanahan, Omaha, formerly president of the Nebraska State Medical Association, sailed from San Francisco, January 2, for Cheng Mai, Siam, where he will establish a missionary medical clinic in memory of his deceased wife. Dr. McClanahan for years has been interested in the medical mission at Cheng Mai. The *Nebraska State Medical Journal* notes that Dr. McClanahan's new undertaking emphasizes the type of service he has rendered to the sick in his home country.

Society to Approve Tenants.—Representatives of the Dodge Building Company of Chicago, owners of the Medical Arts Building at Seventeenth and Dodge streets, Omaha, came to Omaha, January 19, to consult with the Douglas County Medical Society concerning tenants in the new Medical Arts Building, which will be ready for occupancy, May 1. It was agreed that no physicians would be admitted without the approval of the medical society. The new building is of the most modern and improved type.

NEW YORK

Personal.—Dr. Frank W. Shipman, health officer of Mount Vernon, was appointed health commissioner of that city for life, January 19, in succession to the late Dr. William H. Purdy.

Society News.—Dr. Victor C. Jacobson addressed the Medical Society of the County of Albany, January 12, on "Pathology of Coronary Arterial Disease." Dr. Lemuel W. Gorham on "Coronary Thrombosis or So-Called Acute Indigestion," and Dr. Nelson K. Fromm on "Differential Diagnosis of Infantile Paralysis."

Hospital News.—Two hundred radio "ear phones" were installed in the wards of Lebanon Hospital, New York, January 11, the gift of Mr. Sidney Schwab, a director of the hospital.——The Staten Island Hospital recently announced that Mr. David J. Tysen had given to that institution, $200,000 for the construction and equipment of a building in memory to his parents, to be known as the Tysen Memorial School for Nurses.

New York City

Dr. Golub Resigns.—Dr. J. J. Golub, medical director, Beth Moses Hospital, Brooklyn, has resigned, effective March 1, to accept a position as assistant director of Mount Sinai Hospital, New York. Dr. Golub graduated from Boston School of Medicine in 1915; was assistant surgeon, U. S. Public Health Service, for three years; was a member of the Medical Commission of the American Joint Distribution Committee, and served in Eastern Europe from 1921 to 1924.

Fund for Study of Pneumonia.—A gift of $10,000 a year to be used in the study of the prevention and cure of pneumonia has been made by Mr. Lucius N. Littauer to New York University, to be administered under the direction of Dr. William H. Park, director of the laboratories, New York Department of Health, and a member of the faculty of New York University. The gift has been designated as "The Lucius N. Littauer Fund for Prevention and Cure of Pneumonia." Mrs. Littauer died of pneumonia about two years ago.

Personal.—Dr. Charlton Wallace has been made attending orthopedic surgeon, with a full complementary staff, in the newly created division of orthopedic surgery at the Hospital for Ruptured and Crippled.——Dr. Henry C. Falk, New York, was elected Grand Consul of the Phi Delta Epsilon Medical Fraternity at the recent annual convention in Baltimore, and Dr. Henry B. Boley, 11 Weirfield Street, Brooklyn, Grand Scribe.——Dr. Robert Abrahams has recently been reappointed manager of the Manhattan State Hospital, Ward's Island, and president of the board of managers.——Dr. Zachary Sagal has been promoted to assistant chief of gastro-intestinal diseases at the Vanderbilt Clinic.——Dr. Thomas Archibald Malloch, who was recently appointed librarian of the Academy of Medicine, has returned from Europe, where he did research work in the Bodleian Library at Oxford, England.

Physicians' Home Has Option on Estate.—It was announced, January 28, that the Physicians' Home, Inc., has an option on a 300 acre estate at Ridgefield, Conn., as a site for a home for incapacitated and aged physicians. The estate can be purchased, says the New York *Times*, for $125,000, although it is said to have cost more than $1,000,000. Dr. Wendell C. Phillips, President Elect of the American Medical Association, who, among others, addressed the meeting at which the announcement was made, again gave assurance of the American Medical Association's support of this movement; he recommended that state units be organized to dispel the opinion that the project is an activity of the state of New York; Dr. Robert T. Morris, president of the Physicians' Home, Inc., said that if the estate in Connecticut is purchased, this unit would be used for disabled physicians in the Eastern states.

OHIO

Columbus Mortality Last Year.—The death rate for Columbus last year was 13.8 per thousand population, an increase of 0.7 over the death rate of 1924 (the death rate for the state for 1925 was 11.6), it is reported. The greatest increase was in deaths from influenza, pneumonia, heart disease, enteritis and traffic accidents; there was a decrease in deaths from diphtheria, cancer, nephritis and diabetes.

Hospital News.—The Common Pleas Court has appointed a building commission to act jointly with the county commissioners of Stark County in the construction of the new $750,000 county tuberculosis sanatorium, for which a bond issue was recently approved.——The opening of the new Belmont County Tuberculosis Hospital has been delayed on account of the lack of funds to equip the building.——Dr. Raymond W. Bradshaw is resident clinical director of the new Allen Hospital erected at Oberlin College, as the central unit in the Student and Community Health Service. Each student pays $10 a year for clinical and dispensary service and ten days free hospital care; he chooses and pays for his own physician.——Dr. Urban D. Seidel has been elected chief of staff for 1926 for the Children's Hospital, Akron, and Dr. Alexander S. McCormick, secretary.

Personal.—Samuel T. Pyper of the Dayton City Health Department was appointed, January 27, to a position on the board of health of Cincinnati.——Dr. Guy H. Swan has resigned as a member of the board of health of Bellefontaine. ——Bradley M. Patten, Ph.D., associate professor of histology and embryology, Western Reserve School of Medicine, Cleveland, recently spent two months in Baltimore studying the collection of mammalian embryos at the Carnegie Embryological Institute.——Dr. Edward J. Schwartz, who resigned as epidemiologist of the state department of health some time ago to accept a public health position in Florida, has returned to Ohio to become health commissioner of Lake County.——Dr. J. Will Payne has been elected health commissioner of Lawrence County, Ironton, and will take up his new duties, June 1.——Dr. John N. Ellison, Portsmouth, has been elected president of the Hempstead Academy of Medicine, to succeed Dr. Harry A. Schirrman.——Dr. John Prather has returned to the Massillon State Hospital, Massillon, as assistant surgeon.——Dr. Robert C. Longfellow, who has been in Cairo, Egypt, for several months, will return to Toledo about April 27.

PENNSYLVANIA

Hospital News.—Dr. Leo W. Hornick, Johnstown, has been elected president of the staff of the Mercy Hospital for 1926, Dr. Clarence M. Harris, vice president, and Dr. Bernard J. McCloskey, secretary; a department of pediatrics was recently organized at the hospital.——The Meadville Spencer Hospital building has been opened, replacing the structure destroyed two years ago by fire.

Personal.—Dr. James D. Lewis has been appointed director of public health of Scranton.——Dr. Charles S. Abbott has been elected president of the board of health of Bristol. ——Dr. Wilfred T. Grenfell, medical missionary, gave an address at Oil City, January 18, on "'Mid Snow and Ice in Labrador," under the auspices of the Teachers' Association. ——Dr. George A. Reed, Erie, has been elected president of the Erie Anti-Tuberculosis Society.

Philadelphia

Personal.—Dr. Bowman C. Crowell, professor of pathology, Jefferson Medical College, has resigned and has been appointed associate director of the American College of Surgeons, Chicago.

Hospital News.—Employees in the auditing department of Gimbel Brothers' store gave 250 books and Mr. Richard Gimbel a bookcase, February 2, for the children's ward in Jefferson Hospital.——The Philadelphia Music League has been instrumental in installing 325 radios in the hospitals and various institutions in the city.

Society News.—Dr. Clyde Calvin Fox addressed the Philadelphia Laryngological Society, February 2, on "Pemphigus of the Mouth and Pharynx."——Dr. Guy L. Hunner, Baltimore, addressed the College of Physicians of Philadelphia, February 3, on "A New Abdominal Syndrome, Its Etiology, Pathology and Treatment."——Dr. Knud Faber, professor of medicine, University of Copenhagen, delivered the seventh Nathan Lewis Hatfield lecture of the College of Physicians, February 12, on "Etiology and Pathogenesis of Achylia Gastrica."

SOUTH CAROLINA

Hospital News.—The Sumner Hospital at Rockhill was destroyed by fire, January 25.

Personal.—Dr. Lee W. Milford, Anderson, has taken up his duties as college physician for Clemson College, succeeding Dr. George D. Heath, who held that position for several years.——Dr. R. Andral Bratton, York, has been appointed county physician.——Dr. Leon Banov, Charleston, county health officer, has taken over the duties of city health officer succeeding Dr. John Mercier Green in the latter capacity, and will henceforth direct both city and county health departments.

TEXAS

Health at El Paso.—Telegraphic returns from sixty-eight cities with a total population of twenty-nine million, for the week ending January 30, show, the department of commerce says, that the highest mortality rate (31.3) appears for El Paso. The death rate given for El Paso for the corresponding week last year was 21.4. The average mortality rate for this group of cities was 14.5, as against 14.2 for the corresponding week of last year.

Thirty Minutes in Jail.—The *Texas State Journal of Medicine* reports the sentencing of a chiropractor of Dallas, recently, who pleaded guilty to violation of the medical practice act, to a fine of $30 and thirty minutes in jail, and that of a negro "hoodoo doctor" to a fine of $50 and thirty minutes in jail, on a similar charge. The *Journal* also reports the names of various other Texas chiropractors against whom charges have recently been filed. The state medical association and the state board of medical examiners are making a fight to rid the state of unlicensed practitioners.

Courses in Rural Sanitation.—A new course in rural sanitation will be established by the Agricultural and Mechanical College for the next school term to include studies in sewage disposal for rural homes, safeguarding farm water supplies, malaria and hookworm control, sanitation in rural schools and the general relation of sanitation to health. This college also has at present a course in sanitary engineering and city management; other public health courses are being offered by Baylor College. Similar courses will soon be adopted in other leading colleges in the state to meet the increasing interest in public health work.

WASHINGTON

Personal.—Dr. Leon L. Goodnow, Aberdeen, has been appointed chief medical adviser to the department of labor and industries to succeed Dr. Walter Kelton, Seattle, resigned. ——Dr. Ralph Hendricks has been reelected city health officer of Spokane; he has been serving the city in that capacity for six years.

Hospital News.—St. Luke's Hospital, Bellingham, has formally dedicated its new wing, which cost $100,000.——The Centralia General Hospital Association has awarded a contract for the construction of a three story, forty bed hospital to cost $60,000.——The Valley Hospital, Puyallup, formerly known as the Puyallup Clinic, is now a general hospital, managed on the open staff plan.

Malignant Smallpox.—The *Bulletin* of the King County Medical Society, Seattle, notes that four cases of "black" smallpox recently developed at Firlands, and that it was understood that all four of the patients died. The health department notified the King County Medical Society to be on the lookout for such cases, as two of them had been treated in the early stages of the disease for influenza.

Society News.—Dr. Edward S. Judd, Rochester, Minn., conducted clinics at the Providence Hospital, Seattle, January 15-16, under the auspices of the Seattle Surgical Society, and on the latter date was a dinner guest of the society. ——Dr. E. Frank Chase, Seattle, has been elected president of the Puget Sound Academy of Ophthalmology and Oto-Laryngology; Drs. John A. Johnson, Tacoma, and Dr. Spencer S. Howe, Bellingham, vice presidents, and Dr. Morrill J. Morris, Seattle, secretary-treasurer.——Dr. William F. Wild, field representative of the American Society for the Control of Cancer, New York, addressed physicians and nurses in Seattle, February 6.

WISCONSIN

Personal.—Dr. Otto Fiedler, Sheboygan, has been reelected president to the state board of health; Dr. Joseph Dean, Madison, reelected vice president, and Dr. C. A. Harper, state health officer.

Dr. Warfield Appointed Director of Dispensary.—Dr. Louis M. Warfield, Milwaukee, has been appointed clinical director of the Milwaukee County Dispensary, to succeed Dr. John P. Koehler, who resigned about a year ago to become health commissioner of Milwaukee. Dr. Warfield formerly was on the faculty of the University of Michigan Medical School, Ann Arbor, and was clinical director at the Milwaukee County Hospital for many years.

GENERAL

English Medical Society on Tour.—The Cambridge (England) University Medical Society will visit America during August and September, leaving Liverpool for Montreal, August 13. The party will comprise about 200 physicians and students of medicine at Cambridge University. They will go to Toronto, Niagara, Washington, Baltimore, Philadelphia, New York, New Haven and Boston.

New Dermatologic Society.—The Baltimore-Washington Dermatological Section on invitation voted, January 21, to join the Boston, Philadelphia and New York Dermatological Society; the group then to be known as the Atlantic Dermatological Society. At the last Baltimore-Washington meeting, with Dr. Henry H. Hazen, Washington, presiding, many rare cases were presented. The next meeting will be in Baltimore, February 18.

National Board of Medical Examiners.—More candidates were examined by the National Board of Medical Examiners

in 1925 than in any previous year, 573 having taken part I; 349, part II, and 217, part III. Examinations in parts I and II will be held, June 21-23 in class A medical schools throughout the country. There was also an examination in parts I and II, February 10-12. The board of medical examiners of the territory of Hawaii has voted to accept the certificate of the National Board of Medical Examiners for licensure.

Award of Prize.—Dayton C. Miller, D.Sc., professor of physics, Case School of Applied Science, Cleveland, was awarded the $1,000 prize of the American Association for the Advancement of Science at the meeting of that association, Kansas City, Dec. 29, 1925, for his address on "The Michelson-Morley Ether Drift Experiment," which was the presidential address before the American Physical Society. Dr. Miller has been the professor of physics at Case since 1893.—— Liberty Hyde Bailey, Ithaca, N. Y., formerly director of the College of Agriculture, Cornell University, was elected president of the American Association for the Advancement of Science, and also president of the Botanical Society of America, at the recent meeting at Kansas City.

Annual Clinical Meeting.—Surgical clinics at the hospitals in Louisville, Ky., were held each day during the annual clinical meeting of the American Association for the Study of Goiter, February 1-3; among others, Dr. Emil Goetsch, Brooklyn, discussed "The Diagnosis and Treatment of Certain Obscure Cases of Chronic Hyperthyroidism" (lantern demonstration); Dr. John H. Musser, Jr., New Orleans, "Pulmonary Tuberculosis and Hyperthyroidism"; Dr. J. Howard Frick, Philadelphia, "Treatment of Goiter by Intravenous Therapy"; Dr. John J. Maloney, Cincinnati, "Ligneous Thyroiditis"; Dr. Marcus O. Shivers, Colorado Springs, Colo., "Thyroid Infections," and there was a symposium on goiter in which, among others, Dr. Curran Pope, Dr. Frank P. Strickler, Jr., Dr. Irvin Abell and Dr. William E. Gardner took part.

First American Health Congress.—This congress, which convenes in Atlantic City, May 17-22, will be the first occasion that those who are doing public health work in America will be able to view the work they have done as a whole. Under the auspices of the National Health Council, the participating organizations will cover every phase of public health. Among others, Sir Arthur Newsholme, prominent in public health work in England, and George E. Vincent, Ph.D., president of the Rockefeller Foundation, will address the opening session. Meeting at the same time in Atlantic City will be the three national nursing organizations and the American Child Health Association, and the Conference of State and Provincial Health Authorities of North America. Special railroad rates have been secured, and it is announced that at least 7,000 will be in attendance.

Change of Address.—The National Committee for the Prevention of Blindness has moved its headquarters to 370 Seventh Avenue, New York, in which building there are thirteen other health organizations, many of them members of the National Health Council. Dr. William H. Wilmer, director of the William Holland Wilmer Foundation, Johns Hopkins University, Baltimore, and Dr. William F. Snow, director of the American Social Hygiene Association, have been elected to the board of directors of the National Committee for the Prevention of Blindness, and Dr. Benjamin Franklin Royer, formerly chief medical inspector, Pennsylvania State Department of Health, has been appointed medical director of the committee; ten years ago the National Committee for the Prevention of Blindness comprised three persons; now it includes among its members and contributors more than 14,000 persons. Its work is supported entirely at present by volunteer public contributions.

Corn Sugar as Preservative.—An amendment to the federal Food and Drugs Act permitting the use of corn sugar as a preservative and for sweetening purposes is provided in a bill favorably reported to the Senate from the committee on manufactures. The purpose is, primarily, to increase the market for corn. The committee states that the present production of corn sugar has been largely developed within the last two years; that it is a supersugar, nearly 100 per cent pure; that as a preservative it has nearly 30 per cent average over cane or beet sugar; and that 25 pounds of sugar can be obtained from a bushel of corn. The amendment will overcome certain rulings which have designated cane sugar and beet sugar as sucrose, and corn sugar as dextrose. There is nothing in the Food and Drugs Act to prevent the use of corn sugar as a preservative or in canned goods; but, owing to the fact that it has been designated as dextrose, there has been doubt in the minds of manufacturers as to whether or not the product can be used in connection with the canning of food products unless it is named on the labels as dextrose.

Report of Commonwealth Fund.—The latest enterprise of the Commonwealth Fund is that of assisting rural communities in establishing hospitals; $85,000 for a small hospital at Murfreesboro, Tenn., was recently appropriated; plans are under consideration to provide for the construction of two rural hospitals each year. The Commonwealth Fund appropriated in the fiscal year ending Sept. 30, 1925, $241,000 for the child health program, which includes demonstrations at Fargo, N. D.; Athens, Ga.; Rutherford, Tenn., and Marion County, Ore. A branch of the child health program is organized in Austria, where there are 104 child health stations and other work in operation which involved the expenditure last year of $100,000. The fund granted $36,000 for psychiatric fellowships at the University of Pennsylvania School of Medicine, and $15,000 for the development of the psychiatric clinic at Columbia University College of Physicians and Surgeons, New York. Altogether, about $425,000 was appropriated in this field and that of child guidance and the prevention of delinquency, and the total expenditure for child welfare, which has been one of the chief interests of the fund, amounted to $847,000 last year. Miscellaneous appropriations by the Commonwealth Fund included, among others, $15,000 to the National Board of Medical Examiners, $6,000 to the New York University for research in scarlet fever immunization, and $15,000 to the American Society for the Control of Cancer and its educational campaign. This fund was established in 1918 by Mrs. Stephen V. Harkness, and its endowment amounts now to more than $38,000,000.

Declaration of Public Men and Scientists.—At a conference, February 1, Washington, D. C., of prominent public men and scientists on a special board of trustees of the National Research Endowment, the following declaration was made public:

The Trustees of the National Research Endowment, recognizing that human progress depends in large degree on research in pure science, declare their conviction that:

1. The United States, which already occupies a leading position in industrial research, should rank with the most enlightened nations in the advancement of pure science.

2. It is wiser to make large expenditures for scientific research, thus advancing civilization, improving human welfare, conserving health, and saving countless useful lives, than to tolerate unnecessary suffering and then endeavor to alleviate it at still greater cost.

3. Research in all branches of the mathematical, physical and biologic sciences should be encouraged, because of the intellectual and spiritual value of adding to knowledge and because the greatest advances in science and in industry often result from apparently useless abstract discoveries.

4. Scientists exceptionally qualified to widen fundamental knowledge through research are of such value to the nation that every effort should be made to facilitate their work.

5. The overcrowding of educational institutions, and the consequent excessive demands of teaching and administration, have further reduced the limited opportunities for research previously enjoyed by the members of their faculties.

6. The funds now available for the support of research in pure science in the United States are far below what our population, education and material resources demand.

7. The National Academy of Sciences, created by congressional charter, the scientific adviser of the government, and composed of leading investigators in the closely interlocked and mutually dependent mathematical, physical and biologic sciences, is peculiarly qualified to evaluate the needs of pure science in America, to stimulate its progress, and to insure the widest use of funds provided for research.

In view of these considerations, the trustees of the National Research Endowment, established by the National Academy of Sciences, propose immediately to secure adequate funds for the encouragement of research in pure science.

Among those in attendance at the organization meeting of this special board of trustees, which was recently appointed by the National Academy of Sciences, were Secretary Hoover, chairman; Albert A. Michelson, president, National Academy of Sciences; Elihu Root; Col. Edward M. House; Cameron Forbes; Owen D. Young; Dr. Simon Flexner; Dr. William H. Welch; Dr. Robert A. Milliken; Dr. John J. Carty, vice president, American Telephone and Telegraphic Company; Prof. A. B. Lamb, Harvard University; Prof. Oswald Veblen, Princeton University; Dr. Thomas H. Morgan, Columbia University, and Dr. George E. Hale, director of Mount Wilson Observatory, Pasadena, Calif.

LATIN AMERICA

Personal.—Dr. A. Ceballos, professor of surgical pathology at Buenos Aires, is visiting medical centers in the United States.—— Dr. F. M. Fernández, director of the *Crónica Médico-Quirúrgica* of Havana, has been elected president of the Circulo Médico de Cuba.——Dr. Carlos Seidl, Rio de Janeiro, formerly president of the Academia Nacional de Medicina and of the public health service, and director of the *Revista Medico-Cirurgica* of Brazil, was recently tendered a banquet on the occasion of his decoration by the

French government as officer of the Légion d'honneur.——Dr. Juan B. Montoya, Medellin, has returned to resume his surgical practice after several years of service as secretary to the Colombian legation at Paris.——The *Semana Médica* states that Prof. J. G. Obregon y García of Santo Domingo has at last succeeded in founding a national identification bureau. He uses the Argentine (Vucetich) method, with the Lecha-Marzo for the identification records.——The committee in charge of the recent tribute to Prof. Miguel Couto, Rio de Janeiro, on the conclusion of his twenty-fifth year in the chair of clinical medicine, has used the surplus to found an annual prize for the best thesis offered by the last year medical students.——Dr. E. Pardo Figueroa, Lima, is at the head of a commission which includes the chief of the Asistencia Publica, organized to plan ways and means for prevention of the spread of venereal diseases in Peru.

FOREIGN

Smallpox in England.—A total of 960 cases of smallpox were reported in England from Dec. 12, 1925, to Jan. 9, 1926, almost three times the number reported for the same period last year, and the number reported the last week of this period (255) was the largest in any week for several years.

Laboratory Director Wanted in Egypt.—The city of Alexandria, Egypt, is seeking a director for the laboratory of the municipal health department, technical grade No. 11. The salary to begin with is 900 Egyptian pounds, the maximum 1,140. A medical diploma from a high grade school is required, and the candidate must have had experience in municipal health work. A public health diploma and experience in the bacteriology of tropical countries would be desirable. The candidates must not be over 45 years old, and applications must be received before March 10, 1926, addressed to the Président de la Commission municipale, Alexandria, Egypt.

Personal.—Dr. García del Real recently delivered a public address at the Madrid Community House on "What Humanity Owes to Physicians."——Professor Strasser has been appointed president and Dr. Freund secretary of the newly organized commission at Vienna to study rheumatism, to collect data in regard to cases and effects of various treatments. The movement is due to the initiative of Prof. K. F. Wenckebach, and it is proposed to hold regular "Rheumatism Evenings" for discussion.——The *Ugeskrift for Læger* relates that Prof. H. C. Gram, Copenhagen, has been decorated by the French government as officier de l'instruction publique and by the Serbian Red Cross.——Prof. F. Hübotter, of the chair of the history of medicine, Berlin, has gone to China to substitute for a year in place of Dr. Vogt in the Norwegian mission hospital in the Hunan province. He has made a special study of ancient Chinese medicine.——Dr. Harry Plotz of the staff of the Pasteur Institute, Paris, has been made chevalier of the Legion of Honor by the French government.——Among the ten foreign members elected last year by the Swedish Medical Association are Drs. Landsteiner, New York; Wimmer, Copenhagen; Uhlenhuth, Sachs, E. Friedberger, Eicken and Brühl of Germany; H. Burger, Amsterdam, and Ehrnrooth and Hagelstam, Helsingfors. Four prizes were awarded at the annual meeting: to Prof. R. Bárány for his radical operation on the middle ear (1923); to Drs. Liljestrand and Stenström for their research on the heart in exophthalmic goiter; to Drs. Kling, Davide and Liljenquist on epidemic encephalitis and to Dr. C. G. Sundberg, on the physiology of the circulation. Dr. Kling delivered the Lennander Lecture, his topic being "Epidemiology and Etiology of Epidemic Encephalitis." Dr. C. O. Olin was elected president of the association.——Professor Achard, general secretary of the Académie de médecine at Paris, is soon to leave for Japan on an official mission to visit the universities and scientific societies of Japan.——The Royal Institute of Public Health, London, has awarded the Harben gold medal this year to Baron S. Kitasato, chief of the Japanese Institute for infectious diseases.——Professor D'Amato, Rome, has founded an international society, "Pro Leprosis," for study of leprosy and its prophylaxis. The German members of the society are Professors Rille, Kolle and Schmieden, with Finger of Vienna.——Dr. Somen, 113 rue St. Martin, Paris, is organizing a medical chess club.——Dr. Jessen, Davos, spoke recently at the Madrid Medical school on "Early Diagnosis of Tuberculosis."——Dr. E. Luengo, Madrid, was tendered a banquet just before he left for the United States on a Rockefeller Foundation scholarship.——Miss Piera Locatelli, assistant at the pathology institute at Pavia, was awarded a prize by the Académie des sciences at Paris at the recent annual meeting.

Foreign Letters

LONDON

(From Our Regular Correspondent)

Jan. 16, 1926.

The Cancer Virus

Mr. J. E. Barnard, F.R.S., in a lecture on "Ultramicroscopic Organisms," referred to his work during the last two or three years in association with Dr. W. E. Gye. Dr. Gye, he said, had succeeded in growing in artificial cultivation an organism which was certainly closely associated with malignant growth. Examination of these cultures had occupied his attention for a long time past. The problem connected with these small organisms, which were so difficult to define or to see or to know anything about in the microscope, would be in large part solved if there were a test by which one could see whether the small body was living or not living. He had devoted much time to trying to determine whether or not it was living, but up to the present, so far as a definite test went, no serious headway had been made, but a type of body not commonly seen in other conditions had apparently been identified in these active cultures. After many observations, the conclusion had been reached that these bodies were spherical, and on their outside edge little spots representing other spheres had been seen. These bodies behaved in a way essentially different from ordinary bacilli, while the method of reproduction was also different. It was observed that small spheres formed on the edge of a sphere and increased in size until they took definite form like the parent sphere. The small spheres were attached to the parent spheres by filaments.

Smallpox Outbreak in England

There is anxiety at the ministry of health about the spread of smallpox in the northeastern counties. In the seven days up to Dec. 26, 1925, 178 new cases were reported. Of these, 106 were in the county of Durham and thirty-nine in Derbyshire. In four other counties, notifications were made in the same week: Northumberland, nine; Nottingham, fourteen; Yorkshire: East Riding, five; West Riding, four. These cases are of a mild type. This is one of the difficulties of dealing with the disease, for people may have smallpox and be centers of contagion without knowing it. During the past quarter, 675 cases of smallpox have been reported in the county of Durham. Although the disease is of a mild type, hospitals in the affected areas in the northern portion of the county are full. The principal cause of the epidemic is said to be neglect of vaccination. Medical authorities at the ministry insist that there is no assurance of the mildness of the disease continuing and that at any time it may take the terrible confluent form.

Open Air and Health

At the annual meeting of the Science Masters' Association at the King's College for Women, Kensington, Prof. Leonard Hill lectured on open air and health. He said that in Germany since the war great progress had been made in the establishment of clubs for exercises and games in the sunshine and open air, and enormous strides had been made in the development of the young Germans. In England, many people in our large cities today had ill developed bodies and miserable physical health. Agricultural workers, although they had very low wages and, in many cases, bad housing conditions, yet, through exposure to the open air, had a much better mortality rate than had the industrial workers, in spite of the advantages of city life, with its great improvements in sanitation. Wherever the population was crowded,

the mortality rate was high. One of the secrets of open-air treatment was the breathing of cool air which contained little water vapor and, when warmed up to body temperature, could take up a great deal more. The stagnant hot air of crowded rooms was a disadvantage, because it lessened the whole of that evaporation. That was why open-air livers had far less catarrh and colds than other persons. Tuberculosis, scarlet fever and other infectious diseases were spread by the spraying out of these microbes in coughing, sneezing and speaking. The "danger zone" extended to a yard or two from the infected person. If doors and windows were opened, the danger of infection was much less. In crowded rooms, infection became great, for "carriers" of microbes were often present. But even one open window would make an enormous difference, and a fan ventilation had a similar effect, even if the window was shut. Dust was another cause of tuberculosis. It was essential to get dust out of the atmosphere, and that could be done by the use of proper ducts for flint and stone grinders, by water sprays to allay the dust, and by good ventilation. In regard to the clothing and ventilation, Professor Hill said that they should be such as to bring about cool heads and warm feet—the best conditions for the respiratory organs. In the House of Commons the air was driven up through the floor, and it cooled the feet of the members and their heads were in stagnant air. Those conditions were just right for giving members hot heads and cold feet. That was now being altered, and an attempt was being made to drive in air at the gallery level and blow it round the heads of the members.

British Medical Association and Tests for Drunkenness

The British Medical Association has appointed a special committee to investigate the difficult problem of formulating reliable tests for drunkenness. The committee includes four ex-officio officers of the association, four representatives of the Medico-Political Committee, four representatives of the Association of Metropolitan Police Surgeons, one provincial police surgeon (if possible a police surgeon in Liverpool or Birmingham), two stipendiary magistrates, and two physicians with special knowledge, Dr. Farquhar Buzzard and Sir William Willcox have been suggested, and also a medical representative of the services. The idea of forming this committee was put forward before the recent legislation in regard to drunkenness while driving a motor car was passed, but this will increase the importance of any conclusions to which the committee may come.

The Chair of Anthropology in the University of Sydney

A committee was appointed by the senate of the University of Sydney to consider the selection of a suitable occupant for the new chair of anthropology. It consisted of J. T. Wilson, professor of anatomy in the University of Cambridge; G. Elliot Smith, professor of anatomy in the University College, London, and Dr. A. C. Haddon, reader in ethnology, University of Cambridge. After considering all the possible candidates likely to be available for this important position, the selection committee recommended that the chair be offered to A. Radcliffe-Brown, M.A., professor of social anthropology in the University of Cape Town, South Africa. This recommendation was unanimously adopted by the senate. Professor Radcliffe-Brown has signified his acceptance. He has been engaged in anthropological work for the last sixteen years in the Andaman Islands, Australia and South Africa. The establishment of this chair has been made possible by the action of the commonwealth of Australia and the several state governments on the recommendations of the Australian National Research Council, the universities and the scientific bodies in the various states in providing sufficient funds. Prof. A. Radcliffe-Brown was awarded a studentship to make investigations on the Andaman islanders. As a result of this research he was elected a fellow of Trinity College, Cambridge. In 1909 he published an essay on the religion of the Andaman islanders. He was appointed to a studentship for field work in northwestern Australia in 1910, some of the important results of which were published. During the four years of his professorship in Cape Town, he has built up a vigorous department of anthropology and has stimulated widespread interest in the subject among university students.

The Distribution of Intelligence

Mr. J. F. Duff, lecturer on education, Armstrong College, Newcastle, gave an interesting lecture on "The Distribution of Intelligence" to the Eugenics Education Society. Comparing past and present, he was of opinion that a kind of practical intelligence developed more rapidly formerly than now. Referring to facts published in relation to schools in Northumberland, he said that the highest average intelligence quotient was found in the residential suburbs of Newcastle. In the coalfields, where the majority of the scholars were miners' children, the average was considerably lower. Fishing villages produced the lowest average quotient. In the pastoral districts the average was higher than in the coal fields, and some of the highest quotients in the county were found in these remote schools. It must not be supposed that intelligent miners were rare, but in many areas the unintelligent man, taking the line of least resistance, was certain to attach himself to the mines in some capacity. Speaking of the relation between social class and intelligence, Mr. Duff said that the children of brain workers showed an average intelligence of 106.6 and children of manual workers, 98.6. That meant that at the age of 12 the one class was a year ahead of the other in mental development. Much of the present work of inspection was done in the dark, and he suggested that in the absence of local knowledge an inspector might ask for a list of the parents' occupation. For dealing with the difficulty presented by the teaching of more gifted and less gifted children, the best compromise he knew was to form A and B classes in the same school.

ITALY

(From Our Regular Correspondent)

Dec. 15, 1925.

Treatment of Tetany by Means of a Parathyroid Graft

At the Accademia Medico-Fisica Fiorentina, Prof. Cesare Frugoni, the occupant of the chair of special medical pathology at the University of Florence, recently reported a case of tetany in a heredosyphilitic adult, whom he treated by means of a parathyroid graft inserted in the tunica vaginalis of the testis. The graft was prepared by Professor Comolli, assistant surgeon of the Istituto di clinica chirurgica, after the Voronoff method. The parathyroid was taken from a human subject who had just previously undergone a strumectomy performed by Clinical Professor Burci. The patient had suffered grave and repeated attacks of generalized tetany for several years. Various medical treatments had been in vain. Since June last, when the operation was performed, he has not had an attack. There remains only a slight Chvostek sign. This is the only case of a patient so treated in medical literature.

The New Pavilion of the Rickets Institute of Milan

On December 6, the crown prince laid the corner stone of the new Humbert of Savoy pavilion of the Instituto di Rachitici of Milan. The plan for the institution began to take shape in 1874, owing to the activities of Gaetano Pini. At present, the institute consists of nine large pavilions, in addition to the one now under construction. In 1924 the number of charity cases treated in the outpatient orthopedic department reached

2,687. The new pavilion will allow the admission of more crippled, maimed and paralytic children, will facilitate reeducation, will aid in treatment of war cripples, will establish a new department for the treatment of children affected with osteoarticular tuberculosis and, finally, will create a section for rachitic infants.

Military Medical School

The Military Sanitary School in Florence was reopened and the thirty-eighth academic year begun, Dec. 3, 1925. Colonel Grixoni, M.D., director of the school, reviewed its work. The school was founded in 1883 for the purpose of providing additional medical officers for the army medical corps. It was necessary that young graduates in medicine and surgery should receive specialized training for the function of military physician or surgeon. Later, it was thought desirable also that the medical officers in the active permanent service attend the school. The speaker recalled that the school furnished for the Great War a medical corps that always proved equal to its tasks.

After the war, the school resumed all its functions, being provided with an excellent corps of instructors and aided also by the professors of the local university. The war suggested new and complementary courses in chemistry, toxicology, commercial products, chemical warfare and medical parasitology. To this has been added the psychophysiologic center for aeronautics. In a few months, there will be in operation a room the barometric pressure and temperature of which can be regulated to reproduce the conditions in which aviators must often operate. The medical officers attached to the psychophysiologic center have made important researches on the physiology and pathology of man while in flight. The institute plans this year for the first time a course in colonial hygiene and pathology, for young medical officers who go to our African possessions. With the opening of the next school year, there will be closer collaboration between the Scuola di sanità militare and the neighboring military hospital. Connected with the school is also the Biblioteca medica della guerra (war medical library).

Colonel Grixoni paid his respects to the memory of three members of the corps of instructors who died in the past year: Prof. Guido Banti, Professor Nieddu, M.D., and Colonel Villa Santa, M.D. General Calegari, M.D., director general of the army medical corps, delivered a short address.

Society of Experimental Biology

The Society of Experimental Biology was recently founded at Pavia, with Senator Giulio Fano, professor of physiology at the University of Rome as president. All Italian devotees of experimental biologic subjects are eligible to membership. The purpose of the society is to promote research in biology. Its headquarters will be in the city where its president resides. In localities in which at least ten members reside subchapters will be created. The organ of the new society is the *Bollettino della società di biologia sperimentale*, the president of the society being ex officio the managing editor. The bulletin will publish the proceedings of the regional and the plenary meetings, and the summaries of the scientific communications, the general reviews and the discussions pertaining thereto.

Antivenereal Prophylaxis in the Army in 1924

The war department publishes the statistics pertaining to antivenereal prophylaxis in the army for the year 1924, as compiled by Colonel De Berardinis, M.D., chief of the bureau of statistics of the army medical corps. During 1924, 71,614 army men made use of antivenereal prophylaxis, as compared with 58,875 in 1923, and with 19,735 during the second half of 1922. The increase is believed to be due to the campaign of instruction that has been carried on, to the creation of new prophylaxis rooms, and to the confidence that has gradually been awakened among the soldiers with regard to the efficacy of prophylaxis.

The percentage of infections developing among the men using prophylaxis varied from 0.34 in the army corps of Milan to 1.44 in the army corps of Bari. The marked difference is attributed to the greater care and accuracy with which the prophylactic measures were carried out in certain branches of the service.

During 1924, there were reported to the war department 5,527 new cases of venereal disease, which included 490 men who had received prophylactic treatment.

The number of patients who waited three hours or more post coitum before taking prophylactic treatment was about 70 per cent in the second half of 1922. This was reduced to 58.2 per cent in 1923, and to 48 per cent in 1924. These figures indicate that the men apparently became convinced that the more promptly it was carried out, the more certain the protection would be.

The number of syphilitic infections in 1924 was reduced to a little more than two cases out of 100 venereal infections.

In view of the difference between the number of infections among those who employed prophylaxis during the first three hours post coitum and the number of infections occurring in those who postponed prophylaxis until after the three-hour interval, Colonel De Berardinis recommends that every tolerated brothel be required to provide a prophylaxis room of the type already established in the garrisons.

Professor Sangiorgi, director of the Hygienic Institute at the University of Parma, recommends that the government provide means of prophylaxis for the civilian population. The state might use, for that purpose, the physician of the port and the physician of the province. The physician of the port would exercise surveillance over sailors from mercantile vessels. The physician of the province would have supervision over inland cities. Prophylaxis in sea ports is being carried out with the best results in Norway, and Professor Sangiorgi thinks that a world-wide system should be worked out based on international agreement.

Researches on Insulin

Eight prizes consisting of money and gold medals have been established for the current year, four for the best experimental researches on insulin and four for the best articles on clinical cases of diabetes treated with insulin. For the first four prizes the following are eligible to compete: assistant physicians holding positions in Italian universities in physiology, pharmacology, general and special pathology, clinical obstetrics and pediatrics; candidates for graduation in medicine who select experimental researches in insulin as subjects for theses to be presented in the aforesaid institutes, and physicians of the Maggiore Ospedale in Milan. For the other four prizes, all practicing physicians in Italy whose names are recorded in the medical register for 1925 are eligible to compete.

Medical Studies at the New University of Bari

The University of Bari is only one year old, but the government intends that it shall become an important center of learning capable of attracting students from the opposite shore of the Adriatic. A number of university professors and other patrons of medicine will establish an association in Bari, which will promote the study of medicine and the allied sciences. The provisional committee plans that the society constitute a forum open not only to physicians but also to biologists, physicists and chemists of the whole region of Apulia. It is planned to make it an academy after the type of the Accademia medica di Roma and the Accademia dei Lincei.

JAPAN

(From Our Regular Correspondent)

Nov. 7, 1925.

The International Conference of Medical Officers

The representatives to the Tropical Medicine Conference had scarcely departed when we received the delegates to the International Conference on the interchange of Medical Officers of Health. The meeting was held, November 19, in Tokyo under the auspices of the League of Nations. Fifteen foreign medical officers were present, including Dr. Ludwik Rajchman, director of the health section, and Dr. T. Madsen, president of the health committee of the League of Nations. On the second day they started on their inspection trip throughout Japan. In the meeting that followed the tour, the visitors asked why the chief of the Japanese health department is not a medical expert, and whether special institutions are maintained for the training of officers. To the first of these questions the Japanese authorities answered that they would appoint a medical expert as head of the health department if occasion should arise to make it necessary; to the second, that although no special training schools are maintained, some of the private laboratories give the necessary training for officers. The foreign representatives found that in the past Japan had used many valuable measures in the prevention of epidemics, but little concerning them has been reported abroad. A few of these measures, for example the precaution against cholera, will be reported abroad, the League of Nations paying the expense. The equipment of the national dietetic laboratory in Tokyo was admired by some foreign representatives, who are said to have proposed sending their own experts to study in that laboratory. Reports concerning this laboratory will be sent abroad in the near future.

The Oriental Red Cross Conference

The third session of the Oriental Red Cross Conference, the second one being postponed sine die, will be held in Tokyo for a week on and after November 15, 1926. On the same occasion the Japan Red Cross Society will celebrate its semicentennial, inviting many foreigners concerned in Red Cross work.

Cholera and Trachoma Cases

According to the report of the health department of home affairs, the number of cholera cases this year amounts to 638, including twenty-eight suspected cases. Bacillus carriers number 220. Of 6,782,006 persons examined, trachoma is reported in 779,157, including 144,086 suspected cases. Severe cases number 80,577, and mild ones, 554,494. The percentage is 11.49.

Fake Diplomas Sold

Recently, certain physicians have declared that they were granted medical degrees from a University of Trinity College, Illinois, U. S. A., on submission of theses, without having attended in person a course of study in that university. The local government investigated the matter and reported that a Chicago firm sold at a good price diplomas in liberal arts, law and medicine to Japanese, Indians and Chinese issued by the University of Trinity College and the Lincoln-Jefferson University of Chicago, and of the American University of Los Angeles. It is reported that diplomas were purchased also from the National University of Science of Chicago. The authorities have warned the recipients of these degrees.

The Doai Memorial Hospitals

After the great earthquake in 1923, the American Red Cross Society quickly raised money by popular subscription for the medical relief fund. For this the Japanese cannot be too thankful. One half of the sum was spent for medical supplies, which were soon sent to the hurriedly constructed hospitals in the devastated districts. The rest of the contribution was sent to the Japanese government some time ago and the decision was made to use it in building a hospital in memory of the Americans' good will. The institution will be organized along American lines. Construction is expected to be finished in the spring of 1927. Nurses are already being trained in the main hospital of the Japan Red Cross Society. We believe that this work will do much toward preserving friendly relations between the United States and Japan.

BELGIUM

(From Our Regular Correspondent)

Jan. 1, 1926.

Alastrim, Smallpox and Chickenpox

Dr. Van Borckel, chief inspector of public health, has addressed to the international bureau of public health a communication on twelve cases of a disease observed in Belgium, all of which presented the clinical aspects of alastrim, or amaas. To make the diagnosis certain, various tests were made in each case: (1) the vaccination test; (2) hematologic tests; (3) the Paul test; (4) the search for Guarnieri corpuscles, and (5) deviation of complement. This group of tests proved that the cases that resembled alastrim did not constitute a specific disease. Varicella may take on the forms of alastrim as well as smallpox.

Anemia Resulting from Radium Therapy

In the course of a discussion on the value of radium therapy in cancer of the uterus, some facts were brought out with reference to the cell destruction that may result from radium treatment. Henrotay referred to a case that resulted fatally. Cahen reported that in 400 cases of cancer of the cervix of the uterus he had not observed a single instance in which anemia from radium treatment had ended in death. However, persons who are constantly exposed to radiation develop obscure forms of anemia. Among the sequels of irradiation is intoxication due to the fact that the radium has liberated products arising from the breakdown of cells.

Heliotherapy in Pulmonary Tuberculosis

At the International Congress of Medical Climatology held in Brussels, Dr. Hervé gave an account of the results from heliotherapy in the treatment of 2,000 patients. The author stated that, with reservations, 75 per cent of tuberculous persons can be subjected to heliotherapy without harm. The sun does not cause congestion or hemoptysis. These statements hold for both mountain and plain. Furthermore, results secured with heliotherapy in pneumothorax have confirmed them, for if there are any patients in whom congestion of the lungs is to be feared, it would be pneumothorax patients, who have only one lung in use and that functioning with superactivity. The author mentioned several classes of patients who may benefit from heliotherapy: pneumothorax patients who, already improved by a pulmonary compression more or less complete, still retain foci insufficiently compressed, or those who, in spite of their compression, remain infected; patients who have passed the acute period of pleurisy; patients with slowly developing bronchitis or even those with ulcers, provided those in the acute stage are excluded, and, finally, those with infected pleuras who are prone to develop purulent pleurisy during pneumothorax treatment.

Rat Extermination and Disinfection

Before the Association des médecins hygiènistes, Dr. Sillevaerts, director of the hygienic institute of the army, described recently the various modern methods of rat extermination and disinfection. Sulphur vapors, carbon monoxide and hydrocyanic acid are the agents most frequently employed and which give the best results. Hydrocyanic acid is the only efficacious method for destroying the parasites of

railway coaches. Sulphur methods ruin the upholstered seats of first and second class coaches.

The Hospital Ship on the Congo

A widespread movement is on foot in Belgium looking toward better health facilities on the Congo. Ex-Governor Lippens of the Congo region, aided by Mrs. Lippens, is planning the establishment on the Congo of a hospital ship, which, owing to its mobility, will render great service to the inhabitants. More than a million francs has already been subscribed for the purpose.

Treatment of Vulvar Epitheliomas

Before the Société belge de chirurgie, Delporte and Cahen referred recently to the usually bad outcome in cases of epithelioma of the vulva. They cited a first series of seven cases treated by radium therapy. The results were inadequate, only two of the patients being cured. In a second series of five cases they applied intensive roentgenotherapy to the glandular regions, followed by removal of glands twelve days later. At the same time, they applied to the vulvar tumor a large number of small radium needles, and a few weeks later vulvectomy was performed. By this new technic they obtained four cures; there was one recurrence.

Spinal Anesthesia

It looks as if a formula for spinal anesthesia that will unite the divergent opinions of surgeons will soon be forthcoming. A long discussion in the Société belge de chirurgie has ended in the adoption of an almost unanimous conclusion. The majority of the authors seem to be in accord in recommending low rachianesthesia, but there is a diversity of opinion as to the value of high rachianesthesia.

Death of Prof. Paul Héger

Prof. Paul Héger, former president of the University of Brussels, was recently killed in an automobile accident. He had given up his duties as professor of physiology only a few years ago. Scarcely a year ago he had resigned his post as permanent member and chairman of the administrative council of the university. At the time of his retirement, he had been appointed honorary president of the council.

Héger may be regarded as the creator of the chair of physiology at the University of Brussels. His activity was displayed mainly through his researches on leukocytosis and inflammation; studies on the absorption of alkaloids by the liver, the lungs and the muscles, and in his numerous writings on the metabolic activity of the nervous system. Héger was an excellent laboratory director. He grouped about him a large number of collaborators, and in the school that he founded he remained the uncontested head even after he resigned from his professorship.

The Société Belge de Chirurgie

The new president of the Société belge de chirurgie is Colonel Derache, M.D., of the army medical corps and chief of the surgical service of the Military Hospital of Brussels. The election of Colonel Derache pays homage to a man who, during the war, was one of the leading organizers of hospitals on the Belgian front, and who is also one of the eminent surgeons of the country.

Exhibit of Works of Art by Physicians

The idea of a salon of art for physicians, launched at the last medical conference of Brussels, is making headway. The medical society of Antwerp organized, this winter, an interesting exhibit of works of art, including music, belles-lettres and painting, all of which were the productions of medical men. The exhibit was a success. Dr. Lambotte, one of the originators of osteosynthesis, exhibited a violin that was entirely the work of his hands.

BERLIN

(From Our Regular Correspondent)

Dec. 26, 1925.

Problems of Puberty

Before the pediatric section of the Berliner Verein für innere Medizin und Kinderheilkunde, E. Spranger, professor of philosophy, and author of a book on the psychology of adolescence, delivered an address on the evolution of puberty. He treated from the psychologic side a theme that, at first sight, appeared to be chiefly physiologic. Spranger believes that the psychic associations that influence the mind are of sensuous origin. Such a conception is based on two suppositions: First, the psyche has a definite structure in which all associations are sensuous, and, secondly, development of this structure is possible and must be assumed. The first supposition leads to the conclusion that every psychic representation must be evaluated with reference to the psyche as a whole, and, furthermore, is connected with the external world and constitutes an integral and yet overlapping part of a greater, all-comprehensive world soul structure. Regarded from this angle, the manifestations of puberty are one thing in rural communities and quite a different thing in urban centers; one thing among the proletariat and an entirely different thing among the classes better situated socially. The second supposition makes it necessary to study every stage in individual psychic development, and forces the assumption that the psychic evolution of the individual has a generic significance with reference to the world soul structure.

Since Spranger does not take physiologic facts as his point of departure but rather the mode in which those facts are intertwined with the imagination, he does not place the birth of sexual desires in the foreground, as is commonly done. On the contrary, the transition from the soul of the child to the psyche of the juvenile lies in the awakening of a new ego, or the opening up of a new inner world of consciousness. With this awakening is connected the newly developing relationships to the external world. Cultivation of the habit of introspection is necessary for the psychic awakening of the juvenile. At times, through the natural endeavor to become acquainted with himself through introspection and meditation, the juvenile becomes reticent or taciturn. Symptoms of this stage are: keeping a diary, writing poetry, increased interest in letter writing, and a greater tendency to form strong personal friendships. This new process in development may be disturbed by the withholding of affection and a lack of understanding of the problem.

A second point in the development of the juvenile is the greater tendency to identify himself with the culture and civilization about him. Whereas the child accepts everything about him as a matter of fact, the juvenile begins to form opinions and to assume more and more definite attitudes toward current beliefs and racial problems. The process of forming a body of original opinions on current issues is a difficult one, and gives rise to frequent misunderstandings. In the acquisition of knowledge or in the growth of individual opinions the imagination of the juvenile plays a big part. The juvenile lives in a world all his own, situated midway between the fairy kingdom of the child and the world of realism. The poetical productions of the juvenile are the result of a desire for self-expression; hence the choice of a material that offers the least resistance to his advances. Therefore, the writing of poetry by juveniles is a physiologic process and does not offer the slightest proof of a genuine poetic gift.

The third point of development is the working out of his own life bent. In this process, there are periodic vacillations, some of shorter and some of longer duration, the idealist quickly changing to a materialist, or vice versa, and the enthusiastic musician of today changing on the morrow to

an equally enthusiastic bicyclist. This is a process of selection, or a survival of the fittest. The juvenile tries to find himself by experimenting with all sorts of situations; hence, too, the frequent desire to become an actor, as an expression of his diffidence about choosing a definite calling. Often such unfulfilled desires of puberty remain fixed in the mind throughout life, and occasionally they break forth afresh, with all their violence, along in the forties. Perhaps one might deduce from Spranger's statements that if a person eventually becomes an artist, it is because the structure of the psyche at puberty persisted in later years.

With reference to love between the sexes, Spranger distinguishes (though he admits that all definitions are inadequate) between sexual impulse and erotic sentiment. The latter is an esthetic form of love which is first kindled by the external beauty of the beloved object and which conceives that object as the embodiment of all human virtues. Sexual impulse and erotic sentiment are essentially of the same origin, but, in the normal development of puberty, the two fields are often differentiated, so that the juvenile does not always experience a sexual impulse, in the narrower sense, and, at the same time, an erotic sentiment toward the object of his affections.

Sexual feeling intrudes on the horizon of the juvenile as something new and weird, sometimes manifesting itself as a thirst for knowledge (poring over the pages of the encyclopedia) and sometimes as sexual desire. It is well to explain to juveniles sexual problems, as early as possible. Possibly the best form is in answer to questions that are apparently disturbing them.

Almost as strong as the sexual instinct is the impulse to achieve recognition and to become established, which leads to the so-called social crisis of puberty. There develops either a materialistic ambition to become famous, or—especially in our own times—the desire to create a world by, of and for juveniles, apart from the rest of the world, the so-called juvenile movement, or, again, one renounces the restraints of modern society, hoping to win laurels in that manner. The bashfulness of juveniles is often due to exaggerated self-consciousness, whereas boldness or impudence may be assumed to cover up inner embarrassment. Besides the desire for self-assertion—to be somebody—there is a strong need of affection. The longing to be understood personally is due to a passionate hunger for affection, and when misunderstandings arise the desire develops that one's friends and loved ones shall suffer, too. The juvenile's need of being understood is so great that any one he understands is in a position to win his affection, and any one that the juvenile does not understand is mercilessly rejected, whether it be parents, teachers or physicians. In closing, Spranger stated that he was not inclined to assume anything pathologic in juveniles unless he failed to explain it from the standpoint of sense appeal.

The second speaker of the evening, Dr. Aron of Breslau, viewed puberty as a bodily manifestation. He, too, developed the idea that the main factor in puberty was not the evolution of the sexual processes leading up to sexual maturity, which, from the gonads as their point of departure (whether from the interstitial cells or from others) bring about the secondary sex characters. On the contrary, he explained puberty as an endosecretory cycle. The gonads affect the sexual function and arrest the growth of the long bones.

In certain pathologic conditions (tumors of the suprarenal cortex) abnormalities of growth are observed, and in animal experimentations it has proved possible to effect at will a delay but not a premature onset of puberty. However, it has been observed that puberty begins earlier in urban centers than among the rural population, and earlier among the wealthy classes than among the less well-to-do. Pfaundler, the pediatrician (Munich), states that, the more slowly and the less noticeably puberty develops, the more natural it is. In fact, the accentuated and sudden onset of puberty, frequently observed among the educated classes in the cities, may be a mild form of pubertas praecox (premature or pathologic puberty). When the question is raised as to the cause of premature puberty, it is natural to think of hereditary influences. On the other hand, external factors, such as diet or cerebral irritation resulting from early mental overwork, have been put forward as the inciting cause. Dr. Aron thinks the principal reason is the lack of physical exercise among city children. Now that sport activities are being more widely introduced in our cities, the coming years will show whether increased physical exercise will retard the onset of puberty.

The City Physicians of Berlin

In addition to the main bureau of health (*Hauptgesundheitsamt*) in Berlin, there are twenty district bureaus. In three of the districts (Charlottenburg, Schöneberg and Neukölln) a physician attached to the health bureau serves as a salaried city councilman and director of the health service. In the other seventeen districts the administration of the health service is in the hands of a medical communal officer from the main bureau, usually elected for life and bearing the title of *Stadtarzt*, or city physician. His superior officer is the burgomaster of the district. The city physician is not permitted to treat private patients.

To the health administration of the districts belong, in addition to the various hospitals, the bathing and disinfection establishments; welfare centers for expectant mothers, puerperants, infants and young children; the school health service, including the transportation service; welfare work among the tuberculous, venereal patients, psychopaths, neurotics, alcoholics and cripples.

The city physicians serve also as administrators and medical directors in various branches of other communal administrations. In many of the welfare departments they attend to all the cases of sickness. In the larger administrative districts, from fifteen to twenty welfare physicians are engaged; these rank as district physicians. In many districts the medical care is organized on the basis of free choice of physician. A considerable number of specialists also serve in the welfare departments. The city physicians have a general oversight of the welfare medical service, and, especially, they consider requests from the welfare bureaus for spa treatment, hospitalization, orthopedic apparatus, artificial teeth and the like. Similar administrative work is performed by the city physicians in the caretaking centers for the war-injured, war orphans and other persons wholly or partially left destitute by the war, together with the unemployed. The city physicians cooperate with the housing bureaus in the distribution and care of dwellings, especially in connection with the crusade against tuberculosis and infant mortality. City physicians also are concerned in the control of epidemics, the supervision of midwives, the hygienic aspects of sports, instruction of the masses in hygiene, boarded-out children, wards, juvenile court aid, and school feeding and public tables. Also a large number of municipal orphan asylums, children's homes, kindergartens and day nurseries are under the supervision of the city physicians.

In many of the smaller outlying districts of the city, the city physicians serve at the same time as school and welfare physicians; often also as confidential physicians for the examination of clerks or secretaries in the district bureaus as to their health and condition for service, or as to their need of a vacation. The city physician, by virtue of his professional training in medicine and hygiene, is thus administrative technician, social hygienist, medical statistician and social politician.

Marriages

JULIAN GRIFFIN ELY, New Bedford, Mass., to Miss May Genevieve Richardson of Millis, Nov. 6, 1925.

JOSE GUILLERMO LEWIS to Miss Sara Chiari, both of Panama, Republic of Panama, February 3.

MORRIS H. NEWTON, Little Falls, N. Y., to Miss Carolyn Race of Herkimer, Dec. 26, 1925.

RANDOLPH L. ANDERSON, Boston, to Miss Gretchen Cutter of Concord, Nov. 18, 1925.

JEROME ZEIGLER to Miss Ellen Arvin, both of Cincinnati, January 1.

Deaths

Archibald Cunningham Harrison ✠ Baltimore; University of Maryland School of Medicine, 1887; professor of surgery at his alma mater and formerly professor of anatomy and surgery at the College of Physicians and Surgeons, Baltimore; past president of the Medical and Chirurgical Faculty of Maryland; on the staffs of the Mercy, St. Joseph's, and the Baltimore Eye, Ear and Throat hospitals, the Church Home and Infirmary, and Hospital for Women of Maryland; served in the M. C., U. S. Army, during the World War; aged 61; died, January 17, of heart disease.

Samuel Jason Mixter ✠ Hardwick, Mass.; Medical School of Harvard University, Boston, 1879; member of the American Surgical Association and the Southern Surgical Association; formerly lecturer on surgery at his alma mater; at one time on the staffs of the Massachusetts General Hospital and the Massachusetts Charitable Eye and Ear Infirmary, Boston; served during the World War; aged 70; died in January, at Grand Junction, Tenn., of pneumonia.

William Tunis Reynolds, Kansas City, Mo.; Barnes Medical College, St. Louis, 1895; member of the Western Surgical Association; on the staff of St. Mary's Hospital; at various times on the staffs of the Research Hospital, St. Joseph's Hospital and the old South Side Hospital; aged 55; died, January 11, of complications following an appendectomy.

Edward Garrett Rhoads ✠ New Hope, Pa.; University of Pennsylvania School of Medicine, Philadelphia, 1885; formerly a minister; at one time on the staff of the Germantown Hospital, Philadelphia; aged 62; died, January 24, at Fairhope, Ala., of heart disease.

John Bayley Jones ✠ Philadelphia; Jefferson Medical College of Philadelphia, 1903; formerly on the staff of the New Jersey State Village for Epileptics and Feebleminded, Skillman, N. J.; aged 48; died, January 14, at the Jefferson Hospital, of myocarditis.

William A. McHenry, Rogers, Ark.; St. Louis College of Physicians and Surgeons, 1906; member of the Arkansas Medical Society; also a druggist; aged 66; died, January 14, at St. John's Hospital, Springfield, Mo., following an appendectomy.

Albion G. Young ✠ Augusta, Maine; Medical School of Maine, Portland, 1867; for forty years connected with the state board of health; director and epidemiologist of communicable diseases; aged 82; died, January 15, of angina pectoris.

James J. Rucker, Overall, Tenn.; University of Pennsylvania School of Medicine, Philadelphia, 1869; member of the Tennessee State Medical Association; formerly member of the state legislature; aged 79; died, January 9, at Nashville.

Virginia Helm Richardson Milner, San Francisco; Johns Hopkins University Medical Department, Baltimore, 1924; intern, Hospital for Children and Training School for Nurses, where she died, January 15, of meningitis, aged 26.

Edwin E. Bird, Buncombe, Ill.; St. Louis College of Physicians and Surgeons, 1903; member of the Illinois State Medical Society; aged 46; died, Nov. 25, 1925, at St. John's Hospital, St. Louis, following an appendectomy.

Uriah Herbert Debendarfer ✠ Mannington, W. Va.; University of Pittsburgh School of Medicine, 1894; aged 57; died, January 10, of injuries received when the automobile in which he was driving was struck by a train.

Joseph W. Darby, Baton Rouge, La.; University of the South Medical Department, Sewanee, 1906; member of the Louisiana State Medical Society; aged 51; died in January, of a self-inflicted bullet wound.

James A. Moss, Memphis, Tenn.; University of Pennsylvania School of Medicine, Philadelphia, 1871; formerly on the staff of the Presbyterian Hospital; aged 77; died, January 18, at the Baptist Hospital.

Edward Joseph Degman, Meriden, Conn.; Jefferson Medical College of Philadelphia, 1913; member of the Connecticut State Medical Society; on the staff of the Meriden Hospital; aged 40; died, January 17.

Byron M. Peters, Jenkintown, Pa.; Hahnemann Medical College and Hospital of Philadelphia, 1886; member of the Medical Society of the State of Pennsylvania; aged 65; died, Dec. 20, 1925.

Wendell Phillips Wingender, Camden, N. J.; Jefferson Medical College of Philadelphia, 1893; formerly member of the school board and coroner; aged 66; died, January 11, of pneumonia.

James W. Coffman, Black Rock, Ark.; University of Louisville School of Medicine, 1871; Jefferson Medical College of Philadelphia, 1883; aged 78; died in January, of pneumonia.

Abraham V. Ponder, Sulphur, Okla.; American Medical College, St. Louis, 1876; member of the Oklahoma State Medical Association; aged 76; died, January 17, of paralysis.

William Samuel Long ✠ Reading, Pa.; University of Pennsylvania School of Medicine, Philadelphia, 1913; aged 38; died, January 17, at the Reading Hospital, of pneumonia.

Gabrielle Debains Gardner, New York; University of Paris, France, 1903; aged 51; died, January 28, at the Peekskill Hospital, of injuries received in an automobile accident.

Frederick Jones, Jr., Camden, N. J.; Hahnemann Medical College and Hospital of Philadelphia, 1907; aged 41; died, January 15, of a malignant tumor of the cervical glands.

Thomas Clay Edwards ✠ Salinas, Calif.; St. Louis Medical College, 1883; on the staffs of the Monterey County, and Salinas Valley hospitals; aged 65; died, Dec. 27, 1925.

John H. Carson, Los Angeles; McGill University Faculty of Medicine, Montreal, Que., Canada, 1881; formerly a practitioner in Minnesota; aged 65; died, Nov. 23, 1925.

Erwin T. Johnson, Hilltown, Pa.; Jefferson Medical College of Philadelphia, 1883; member of the Medical Society of the State of Pennsylvania; aged 68; died, January 18.

Charles Wilbur Walling ✠ Johnson City, N. Y.; Long Island College Hospital, Brooklyn, 1899; aged 49; died, in January, at Binghamton, following a long illness.

William Leo Hetherington, Saranac Lake, N. Y.; Columbia University College of Physicians and Surgeons, New York, 1896; aged 51; died, January 18, of tuberculosis.

Petit T. Reynolds ✠ Monroe, Ga.; University of Alabama School of Medicine, Tuscaloosa, 1897; aged 51; died, January 10, of influenza and pneumonia.

Augustus C. Crothers, Havre de Grace, Md.; University of Maryland School of Medicine, Baltimore, 1888; aged 64; died, January 20, following a long illness.

J. Howard Willets, Port Elizabeth, N. J.; Jefferson Medical College of Philadelphia, 1858; Civil War veteran; aged 92; died, January 22, at Bridgeton.

Duncan Fraser Stewart ✠ Galva, Ill.; Rush Medical College, Chicago, 1900; county coroner; aged 55; died, January 30, following a long illness.

Charles Melville Jordan, Ozone Park, N. Y.; Medical Department of the University of the City of New York, 1880; aged 72; died, January 17.

Samuel Benjamin Fowler, Hendersonville, Tenn.; Medical College of Ohio, Cincinnati, 1881; aged 72; died, January 18, at a hospital in Nashville.

Joseph L. Clark, Jonesboro, Tenn. (licensed, Tennessee, 1889); member of the Tennessee State Medical Association; aged 74; died, January 10.

Ross William Morrish ✠ Fort Collins, Colo.; University of Colorado School of Medicine, Denver, 1914; aged 37; died, January 14, of pneumonia.

Herman B. Oliver, Fillmore, Ky.; Kentucky School of Medicine, Louisville, 1892; aged 60; died, January 10, at Beattyville, of carcinoma.

William Lawrence Kelleher ✠ Marlboro, Mass.; Tufts College Medical School, Boston, 1923; aged 32; died, January 16, of pneumonia.

George W. Miller ✠ Joplin, Mo.; Bellevue Hospital Medical College, New York, 1880; aged 80; died, January 13, following a long illness.

Charles Williard Fox, Roaring Spring, Pa.; Jefferson Medical College of Philadelphia, 1882; aged 66; died, January 15, of pernicious anemia.

James F. Saltry, Scranton, Pa.; College of Physicians and Surgeons, Baltimore, 1887; formerly county coroner; aged 59; died, January 7.

Joseph Melville King, Damariscotta, Maine; Boston University School of Medicine, 1880; aged 72; died, January 18, of angina pectoris.

William C. Karzke, Milwaukee; Wisconsin College of Physicians and Surgeons, Milwaukee, 1907; aged 44; was found dead, January 25.

John B. White, Cave City, Ky.; University of Louisville School of Medicine, 1888; aged 76; died, January 26, of cerebral hemorrhage.

Crosby A. Perry, Pittsfield, Mass. (licensed, Vermont, year unknown); Civil War veteran; aged 87; died, January 19, at North Adams.

George Henry Hashinger, Kansas City, Mo.; Kansas City Medical College, 1894; aged 65; died, January 18, at St. Luke's Hospital.

Henry G. Wagner, Washington, D. C.; Georgetown University School of Medicine, Washington, D. C., 1885; aged 81; died, January 21.

Albert Arthur Hill, Indianapolis; American Medical College, Indianapolis, 1897; died, January 23, following an appendectomy.

Charles T. Baber, Franklin, Ark.; Memphis Hospital Medical College, 1892; aged 61; died, January 8, of cerebral hemorrhage.

Alexander K. Crawford, Oakland, Calif.; Hahnemann Medical College and Hospital, Chicago, 1880; aged 73; died, Oct. 26, 1925.

Charles Otis Kimball, New York; Bellevue Hospital Medical College, New York, 1898; also a dentist; aged 80; died, Dec. 2, 1925.

Leopold H. R. Hibbe, New York; Medical Department of the University of the City of New York, 1891; aged 60; died, January 24.

Edward Roland Hart ✙ Suffolk, Va.; University of Maryland School of Medicine, Baltimore, 1901; aged 45; died, January 22.

John T. Hunt, Macedonia, Ill.; College of Physicians and Surgeons, Keokuk, Iowa, 1878; aged 81; died, January 20, of pneumonia.

Donato Antonio Laurenzana ✙ Chicago; University of Naples, Italy, 1891; aged 60; died, Dec. 19, 1925, of angina pectoris.

Samuel Gilbert Gay ✙ Selma, Ala.; University of Alabama School of Medicine, Tuscaloosa, 1887; aged 61; died, January 15.

Mary L. Becker, St. Louis; Homeopathic Medical College of Missouri, 1878; aged 78; died, January 14, of heart disease.

George O'Gorman, Newark, N. J.; Medical Department of Columbia College, New York, 1881; aged 67; died, January 18.

George W. Milligan, Springfield, Ill.; College of Physicians and Surgeons, Keokuk, 1882; aged 72; died, January 23.

Josiah H. Payne, Columbus, Texas; Memphis Hospital Medical College, 1884; aged 73; died, Nov. 26, 1925.

James Marvin Prichard, Olinger, Va.; Eclectic Medical Institute, Cincinnati, 1874; aged 74; died, January 9.

Dalva Hamit Swope, Brockton, Mass.; Boston University School of Medicine, 1896; aged 58; died, January 21.

Selustias E. Cloud, St. Joseph, Mo.; Northwestern Medical College, St. Joseph, 1888; aged 78; died, January 17.

John Allen Barr, Pittsburgh; Bellevue Hospital Medical College, New York, 1874; aged 79; died, January 18.

Edward A. Patton, Pasadena, Calif.; Miami Medical College, Cincinnati, 1880; aged 67; died, Dec. 13, 1925.

John Edward B. Purdon, Willits, Calif.; University of Dublin, Ireland, 1885; aged 86; died, Oct. 18, 1925.

Joseph Allen Owen, Red Bluff, Calif.; Louisville Medical College, 1888; aged 66; died, Oct. 3, 1925.

Lorenzo D. Murphy, San Miguel, Calif. (licensed, California, 1876); aged 76; died, Oct. 1, 1925.

James P. Hobart, Birchwood, Wis.; Milwaukee Medical College, 1901; aged 52; died, January 9.

Joseph Buran, Los Angeles (licensed, California, 1924); aged 32; died recently.

The Propaganda for Reform

IN THIS DEPARTMENT APPEAR REPORTS OF THE JOURNAL'S BUREAU OF INVESTIGATION, OF THE COUNCIL ON PHARMACY AND CHEMISTRY AND OF THE ASSOCIATION LABORATORY, TOGETHER WITH OTHER GENERAL MATERIAL OF AN INFORMATIVE NATURE

NATIONAL HEALTH SERVICE

Capitalizing Ignorance of Diet, Hygiene and Medical Science

Readers of THE JOURNAL will remember that during the past autumn the United States Public Health Service found it necessary to issue a warning against a concern with offices in Washington, D. C., calling itself the "National Health Service." The National Health Service is a commercial organization that the Surgeon General of the United States Public Health Service declared was attempting to capitalize the research work done by the United States government and to confuse the public into believing that it was in some way identified with the Public Health Service of the government.

The offices of the National Health Service are no longer in Washington, D. C., but in New York City. The concern is either operated from two addresses—17 West Sixtieth Street and 70 Fifth Avenue—or there are two concerns of the same name. From the first address a so-called "Book of Health," a urinalysis "health service" and a line of fad foods are sold. From the Fifth Avenue address letters are sent to industrial concerns urging them to purchase "a remarkable discovery for kidney disease, which has produced unbelievable results even in extreme cases where all other means have failed." Each concern denies connection with the other.

One Harry H. Balkin, who, according to reports, has represented himself to be a physician, was active in the field as a representative of the National Health Service of the West Sixtieth Street address. In fact, in Boston it became necessary to issue a police order forbidding Balkin from giving the so-called health talks on the streets of that city. Balkin, according to some of the National Health Service advertising, is a "Character Analyst and Vocational Advisor." A book of Balkin's, distributed by the National Health Service when in Washington, D. C., entitled "Analyzing Character," was said to show you "How to Read Character at a Glance" and "How to Become a Social Success," and how to do other interesting things.

The men said to be identified with the National Health Service at 17 West Sixtieth Street are, or were, if they are not still:

HARRY LATANER — MARLYN YATES
BEN LATANER — ROLAND R. CONKLIN
LEONARD KEENE HIRSHBERG

The concern, it appears, was established by Conklin, who is said to have been interested in motor busses and Florida real estate. Ben Lataner, it is claimed, is a baker. Leonard Keene Hirshberg, whose name now seems to overshadow all the others and whose professional perspicacity is strongly featured by the National Health Service, is the individual who a few years ago was publishing syndicated medical articles in newspapers credited to "Dr. Leonard Keene Hirshberg, A.B., M.A., M.D. (Johns Hopkins University)." Previous to that Hirshberg was a member of the American Medical Association and when, following some crude journalistic work, the Baltimore City Medical Society was about to expel him he obtained a court order holding up the action of the Board of Censors until he had time to resign. In 1918 and 1919 his name appeared in the *Bulletin* of the "Medical Society of the United States" as "Vice-President for Maryland" and on the earlier date he was scheduled to deliver a paper on "Why the Brain Has Little to do with Memory, Perception or Thinking." The Medical Society of the United States was an organization founded by Ohmann-Dumesnil and Emory Lanphear, originally brought into existence to organize fee-splitters but later described as a "Society of Protest Against the Autocracy of the A. M. A."

In September, 1922, the Better Business Bureau of New York City, a local branch of the national organization devoted to furthering "Truth in Advertising," published in a special *Bulletin* the case of the collapse of the blind-pool operated by Winthrop Smith & Company. The *Bulletin* said in part:

"On September 7th, Post Office Inspector caused the arrest of Dr. Leonard K. Hirshberg of New York and Baltimore, the leading spirit of Winthrop Smith & Co., one of the large blind-pool houses of the east."

In due time Hirshberg came to trial, and in May, 1923, he was convicted of fraud and sentenced to four years in the federal penitentiary. Before he had been in the penitentiary a year newspapers reported that his friends, among them United States Senator Dr. Royal S. Copeland, were circulating a petition for the commutation of his sentence. In June, 1925, Hirshberg was paroled from the pentitentiary. In July his name appeared on the stationery of the "National Health Service" as "Chief of Staff" of the "Medical Advisory Board." The name of Dr. Royal S. Copeland appeared at the same time on the same stationery as "Head" of the "Board." A few months later Dr. Copeland's name disappeared from the letter head.

A full-page advertisement of the National Health Service appears in the magazine *Psychology* for January, 1926. *Psychology* is devoted largely to the exploitation of psychic cure-alls. Not that physical nostrums do not find an apparent welcome in the advertising pages, where "Dream Interpretation," "Forecast of Your Vibrations," "Horoscopes" and "Human Analysis" are to be found rubbing shoulders with a rupture cure, a tobacco habit cure, an "Internal Bath" and a cure for enlarged prostate. The National Health Service advertisement in *Psychology* features Leonard Keene Hirshberg. His picture adorns the page and the public is advised to "Let the World's Greatest Specialist Tell You How to Gain Health, Strength, Beauty, Success, Vim, Vigor in Your Own Home Without Drugs."

The advertisement suggests that the public order the "Book of Health" which will tell one "How to Successfully Treat" a long list of diseases commencing alphabetically at Acne and Anemia, through Blushing, Baldness, Brain Fag, Blackheads, Diabetes, Deafness, Falling Hair, Heart Disease, Hemorrhoids, Insomnia, Kidney Trouble, Liver Complaint, Mental Disease, Nervousness, Obesity, Pyorrhea, Rheumatism "and all other diseases." The book is described as an "astounding storehouse of Vital Health Knowledge." Two choice testimonials are part of the come-on. One is from a lady who says that she was so fat that her husband had threatened to leave her. She had "used every device known to reduce" with no avail until she got the "Book of Health" whereupon she "lost three pounds a week" whenever she wanted to. The other testimonial is credited to a man who says his priest told him about the Book of Health and since getting it, "it has cured seven different members" of his family of "stomach, liver and kidney troubles."

The National Health Service states in some of its advertising that it "is similar to the Life Extension Institute," and gives complete physical examinations with a "Standard Health Service" for $25. The concern has also advertised free "personal health examinations." These are offered in a circular that invites the public to come and listen to Leonard Keene Hirshberg the "Famous, Fiery Lecturer" and "Human Dynamo" who "has a startling message." This circular, like most of the National Health Service advertising, contains the inevitable Hirshberg photograph, the "Humanitarian, Philosopher, Medical Scientist, Research Scholar." The leaflet, after giving an elaborate biography of Hirshberg (minus, of course, the unpleasant blind-pool and penitentiary episodes) ends with this impassioned peroration:

"As a forceful, fiery Lecturer he stands pre-eminent. You will hang on his every word—drink in deep his message.

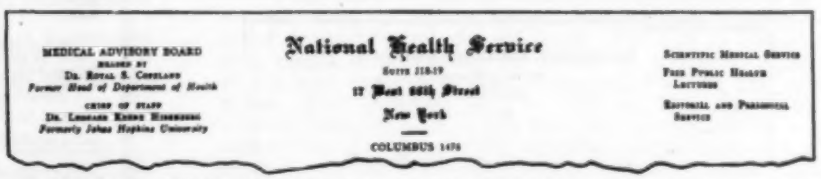
"As a Philosopher few men have surpassed him. As a Medical Scientist he is internationally Famous. As a Consulting Physician he enjoys the distinction of having one of the largest practices in all the United States. He is recognized as one of the few Great Medical Geniuses of the present Century. You cannot afford to miss this Medical Scientist's mighty message. He has a pleasing, magnetic Personality, a living example of the things he preaches.

"Wherever this Great Dynamic Lecturer speaks in public thousands flock to hear him, vast crowds gather close and strain every nerve to listen. They know his every utterance is of momentous value, that he has something really worth while to say. Wise folk hungry for this New Knowledge he is about to impart, will come early at each Lecture to make sure of getting a seat, and a FRONT seat at that."

THE BOOK OF HEALTH

The "Book of Health," distributed in 1925 (copyright, 1924), is, according to the title page "Written and compiled for the National Health Service from data provided by the principal Food and Health Experts of America" and "Published by the National Health Service, Munsey Bldg., Washington, D. C." The cover, however, declares that it is "Published and Distributed by the National Health Service Bureau, 17 West 60th Street, New York City." Mr. H. Lataner in a letter to THE JOURNAL written in July, 1925, declared that "several physicians in good standing in the American Medical Association furnished original articles for the book." The names of none of them appear in the publication; even cursory reading makes one appreciate the reasons for anonymity.

In the preface reference is made to the bulletins and reports issued by the "United States Government through its Health Service Bureau." There is, of course, no such branch of the government known as the "Health Service Bureau." It is worth remembering, however, that originally the "National Health Service" was known as "National Health Service Bureau, Washington, D. C." No wonder the government has received letters from individuals who had the impression that the book was issued under government supervision. After the government had publicly disclaimed any connection with, or endorsement of, the National Health Service the latter issued a mimeographed circular in which it declared that it was "not in any way connected, even remotely, with any other organization." Further: "It is not in any shape or form a part of any city, state or federal government department, bureau or council."


MEDICAL ADVISORY BOARD
HEADED BY
DR. ROYAL S. COPELAND
Former Head of Department of Health
CHIEF OF STAFF
DR. LEONARD KEENE HIRSHBERG
Formerly Johns Hopkins University

National Health Service
SUITE 318-19
17 West 60th Street
New York
COLUMBUS 1476

SCIENTIFIC MEDICAL SERVICE
FREE PUBLIC HEALTH LECTURES
EDITORIAL AND PUBLISHING SERVICE

Letterhead of National Health Service, 17 West Sixtieth Street, New York, as sent out in the summer and autumn of 1925.

A study of the book shows it to be a mixture of the banalities of elementary dietetics and hygiene, and quotations from faddists of the type of J. H. Tilden and Alfred McCann. One chapter in the book purports to give the therapeutic virtues of certain common foods. Thus:

"CARROTS.—A valuable blood purifier and nerve tonic. . . ."

"GARLIC.—Nature's own antiseptic. It is more powerful in its antiseptic action in the body than any artificial germicide. . . ."

"ONIONS.—A valuable antiseptic and blood purifier. . . . Onions and carrots for a good complexion."

"PIE.—The commercial product generally comes with coal tar coloring, canned filling, chemical preservatives, and bleached white flour."

"RADISHES.—Valuable as a tonic."

Physicians reading the chapter dealing with "Tonsils and Adenoids" will be interested in this clinical note:

"European children are rarely affected with diseased tonsils. The children of savage and primitive tribes do not know that such a malady exists. The reason for this is that they have no impure candy made from coal tar poison."

In the chapter on "Appendicitis" we learn that the ". . . mysterious organ known as the Vermiform Appendix is a narrow gland situated at the base of the bowel." We are then told that persons suffering from chronic constipation are "apt to have a food mass stuck" at the "secum" (*sic!*). All of this leading up to the subject matter of the chapter:

"People are frightened because they have been told that unless an operation is performed the appendix will burst. There is very little

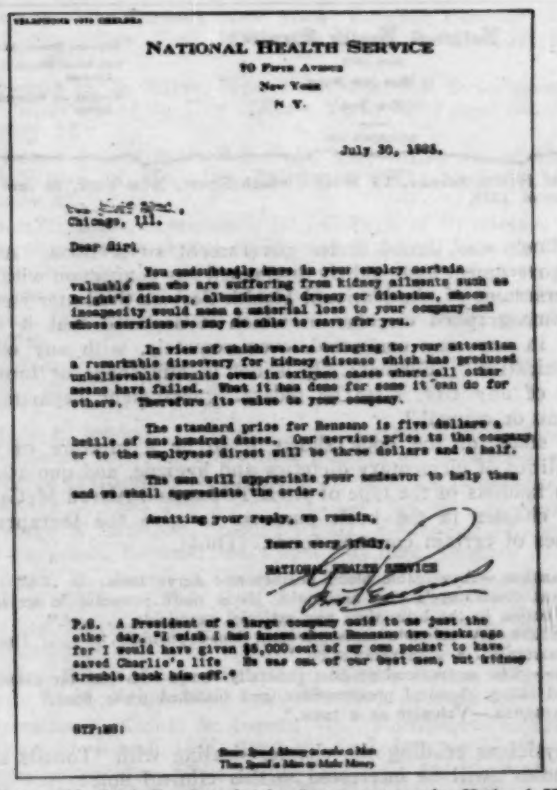
ground for this fear, because death as the result of a burst appendix rarely takes place except on the operating table. A surgeon will often tell his unfortunate victim, or the latter's heirs (should the operation be successful, but the patient die) that the appendix burst. Such a statement is frequently made by the surgeon when proof is not obtainable and his word must be taken."

This, and much more appears in the "Book of Health," which is said to have "all the value of a twenty-five dollars health course" and sells for a mere two dollars. The book is puffed in a four-page circular entitled "Millions Hunger for the Valuable Secrets This Book Discloses." The first page of the circular is a personal, heart-to-heart letter from Dr. Leonard Keene Hirshberg, who wishes to explain "in a most direct and personal way" why he has "accepted the distinguished appointment as Physician in Chief of the fine staff of the National Health Service." The letter is adorned by a picture of the doctor himself. Under the picture is a long list of his degrees and of his literary attainments. It tells where he was in 1902 and 1903, and what he accomplished in 1904 and 1908. It is silent on what he was doing in 1923 and 1924.

THE FAD FOOD BUSINESS

Another circular sent out by the National Health Service is entitled "You Are What You Eat." It, too, contains the same picture of Dr. Hirshberg and the extended, although incomplete, biography. The circular deals with the special foods described as "National Health Foods," which the concern puts out. These foods, we are told "vitalize the body," "overcome weakness" and "banish disease." Among the foods listed are the following:

"DR. HIRSHBERG'S HONEY—Nature's golden sugar in semi-liquid form."
"DR. HIRSHBERG'S CORN MEAL—A body builder."



NATIONAL HEALTH SERVICE
70 Fifth Avenue
New York
N. Y.

July 30, 1925.

Chicago, Ill.

Dear Sirs:

You undoubtedly have in your employ certain valuable men who are suffering from kidney ailments such as Bright's disease, albuminuria, dropsy or diabetes, whose incapacity would mean a material loss to your company and whose services we may be able to save for you.

In view of which we are bringing to your attention a remarkable discovery for kidney disease which has produced unbelievable results even in extreme cases where all other means have failed. What it has done for some it can do for others. Therefore its value to your company.

The standard price for Rensano is five dollars a bottle of one hundred doses. Our service price to the company or to the employees direct will be three dollars and a half.

The men will appreciate your endeavor to help them and we shall appreciate the order.

Awaiting your reply, we remain,

Yours very truly,

NATIONAL HEALTH SERVICE

P.S. A President of a large company said to me just the other day, "I wish I had known about Rensano two weeks ago for I would have given $5,000 out of my own pocket to have saved Charlie's life. He was one of our best men, but kidney trouble took him off."

GTP:MB:

Save Spend Money to make a Man
Then Spend a Man to Make Money

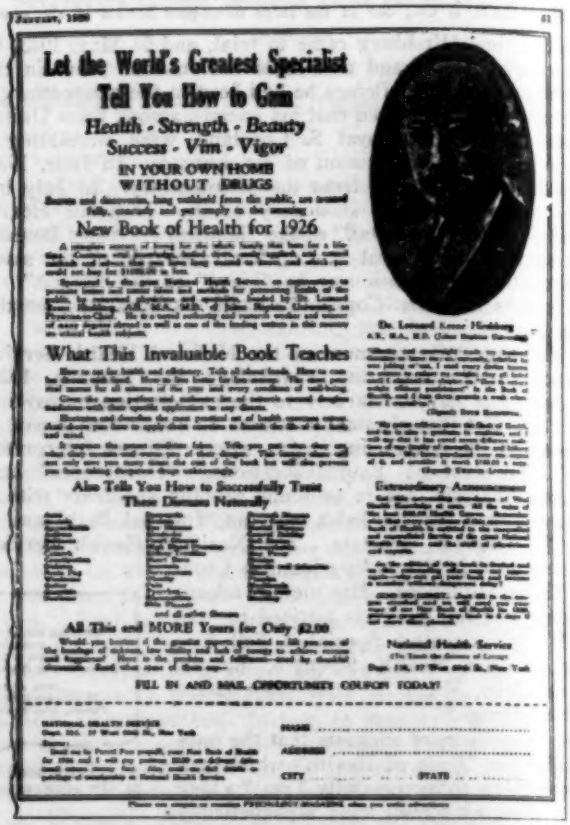
Photographic facsimile of a circular letter sent out by National Health Service, 70 Fifth Avenue, to industrial concerns, puffing the sale of an alleged cure for Bright's disease. Analysis shows the stuff to be essentially milk sugar.

"DR. HIRSHBERG'S OLIVE OIL—Treated with ultra violet rays—ideal for cooking and can also be used as a scalp massage."
"DR. HIRSHBERG'S COFFEE—97 per cent. free from the poisonous caffein."
"DR. HIRSHBERG'S BRAN FOR CONSTIPATION."

In addition to the Hirshberg line there is also a "National Health" line. Thus we have:

"NATIONAL HEALTH DATES—A food that makes nerves tough as steel and blood tingle with health."

"HEALTH SERVICE UNPEARLED BARLEY—Iron in delicious and edible form."
"HEALTH SERVICE SMYRNA FIGS—Relieves constipation and does not rip the intestines to pieces as other physics do."
"HEALTH SERVICE PEANUT BUTTER—It gives the body the power and initiative that is so needed in business and social life."
"NATIONAL HEALTH WHOLE WHEAT SPAGHETTI—It is a flesh reducer and a body strengthener."



January, 1926 61

Let the World's Greatest Specialist Tell You How to Gain
Health - Strength - Beauty
Success - Vim - Vigor
IN YOUR OWN HOME WITHOUT DRUGS

Secrets and discoveries, long withheld from the public, are revealed fully, concisely and yet simply in the amazing

New Book of Health for 1926

Dr. Leonard Keene Hirshberg

What This Invaluable Book Teaches

Also Tells You How to Successfully Treat These Diseases Naturally

All This and MORE Yours for Only $2.00

Extraordinary Announcement

National Health Service

FILL IN AND MAIL OPPORTUNITY COUPON TODAY!

NATIONAL HEALTH SERVICE
Dept. 106, 17 West 60th St., New York

Send me by Parcel Post prepaid, your New Book of Health for Men and I will pay postman $2.00 on delivery (plus small charge money for). Also send me full details of privilege of membership in National Health Service.

NAME .....
ADDRESS .....
CITY ..... STATE .....

Please use coupon or mention PSYCHOLOGY MAGAZINE when you write advertisers

Photographic reproduction (reduced) of full-page advertisement of National Health Service, 17 West Sixtieth Street, in the fad magazine *Psychology* of January, 1926.

RENSANO, THE KIDNEY CURE

The activities so far described are carried on by the National Health Service from the address 17 W. Sixtieth St., New York City. As has already been stated, there is another National Health Service at 70 Fifth Avenue, New York City. This apparently is a subsidiary concern of a "patent medicine" company—"Sano Company"; it denies any connection with the Sixtieth Street organization. Under the name "National Health Service" letters, signed George T. Pearson, have been sent to industrial concerns. These letters read:

"You undoubtedly have in your employ certain valuable men who are suffering from kidney ailments such as Bright's disease, albuminuria, dropsy or diabetes, whose incapacity would mean a material loss to your company and whose services we may be able to save for you.

"In view of which we are bringing to your attention a remarkable discovery for kidney disease which has produced unbelievable results even in extreme cases where all other means have failed. What it has done for some it can do for others. Therefore its value to your company.

"The standard price for Rensano is five dollars a bottle of one hundred doses. Our service price to the company or to the employees direct will be three dollars and a half.

"The men will appreciate your endeavor to help them and we shall appreciate the order."

One industrial concern ordered a bottle of Rensano. The carton in which the nostrum came declared that it was "Prepared by Sano Company, 70 Fifth Ave., N. Y. City." Later a physician wrote to the National Health Service at 70 Fifth Avenue, stating that he hesitated to prescribe the product without knowing something about its composition and asking for information regarding it. He received a reply from 70 Fifth Avenue, but not on the stationery of the National Health Service. It was on the stationery of "Sano

Company," which had the same telephone number and whose letter, like the one received on the stationery of the National Health Service of the same address, was signed "George T. Pearson." It was a most cordial letter but it studiously ignored the request for information. It named a large number of drugs and groups of drugs that Rensano was said *not* to contain but did not name any drugs that Rensano *did* contain. An unopened, original bottle of the stuff was turned over to the Chemical Laboratory of the American Medical Association. The report follows:

LABORATORY REPORT

One original bottle of Rensano (Sano Company, New York) was submitted to the A. M. A. Chemical Laboratory for examination. The bottle contained 238 white tablets having an odor of alcohol and a slightly sweet taste; the average weight of each tablet was 0.13 Gm. (2 grains). The presence of 13 per cent alcohol was declared on the label. Tests for alkaloids, even in minute amounts, were negative. The amount of ash was negligible. Tests for lactose (milk sugar) and alcohol were positive. No other substances were found. From the chemical examination it was concluded that Rensano contained lactose and alcohol; the alcohol was not in amounts to be therapeutically active—less than ½ of 1 drop (minim) of alcohol per tablet.

In order to demonstrate pharmacologically, as well as chemically, the absence of therapeutically active ingredients in the dose recommended, the Laboratory received the cooperation of Dr. Hugh A. McGuigan, Professor of Pharmacology and Therapeutics, University of Illinois. In due time Dr. McGuigan reported his experiments as follows:

The following pharmacologic tests were made with "Rensano for the Kidneys."

1. A solution of 5 tablets in 4 cc. of water was injected into the peritoneal cavity of a rat weighing 185 grams.
2. A solution of 10 tablets in 7.0 cc. of water was injected into the peritoneal cavity of a rat weighing 200 grams.
3. A solution of 20 tablets in 20 cc. of water was injected intravenously into a rabbit weighing 1,500 grams.
4. A solution of 40 tablets in 20 cc. of water was injected into the jugular vein of a young dog weighing 5.5 kilos (12 pounds).

Results: In no case was there any effect. There was no perceptible change in the heart rate, respiration, size of pupil, condition of reflexes, no salivation, no vomiting, no diarrhoea, no action on the kidney, no other action that could be observed or felt. The dose that these small animals received was immense and yet they showed no change from the normal.

In addition I took 20 tablets myself. As far as could be observed or felt there was no action.

From the evidence it appears certain that these tablets are physiologically and therapeutically inert.

Thus from both the chemical and pharmacological examination, Rensano may be considered therapeutically inert.

It will be seen from the report that both chemical and physiologic tests show that Rensano is essentially milk sugar with a minute amount of alcohol. This inert and therapeutically worthless product which is sold at $5 a bottle (2½ cents a tablet) is exploited to individuals and industrial plants with the suggestion that working men suffering from such serious conditions as nephritis and diabetes should be given this product in lieu of medical attention.

The scientific status of the National Health Service as conducted from either of the addresses given and by whatever individuals, is fairly obvious.

Dietary Needs.—Dietary needs are varied by individual differences, by the temperature, and by the nature and length of the day's work. The perfect diet for one may be inadequate for another. Food requirements for individuals who work outdoors in the fresh air are different from those of the professional or business worker or for the student whose work is indoors. It is always desirable, whenever possible, to include green and leafy vegetable and dairy products in the daily diet of either the outdoor or the indoor worker. Cold weather calls for more of the heat producing foods, and hot weather for greater portions of fruit and of vegetables.—Wood, T. D., and Dansdill, T.: By-Ways to Health, 1925, p. 19.

Queries and Minor Notes

ANONYMOUS COMMUNICATIONS and queries on postal cards will not be noticed. Every letter must contain the writer's name and address, but these will be omitted, on request.

FORMALDEHYD FUMIGATORS

To the Editor:—The Bauer and Black fumigators, said to contain "dry paraformaldehyd," are claimed to be effective in the proportion of 2 ounces to 1,000 cubic feet. Forma Germkill fumigators, containing dry solidified formaldehyd, claim an efficiency of double this (1½ ounces to 1,500 cubic feet). If there is any essential difference between dry paraformaldehyd and solidified formaldehyd, I wish you would tell me what it is. It seems to me there should be a definite standard of requirement for these preparations.

JOHN JOHNSTON, M.D., Ritzville, Wash.

ANSWER.—The term "solidified formaldehyd" is used loosely, sometimes denoting "dry paraformaldehyd," but more generally denoting a solidified mass of soap, tallow, or such substance with formaldehyd (a parallel example is "solidified alcohol"). When solutions containing formaldehyd (HCHO) are allowed to evaporate there is a change to the ordinary polymeric form (paraformaldehyde U. S. P.) having the formula $(HCHO)_8$, although there is a possibility of preparing six polymers having the empiric formula $(HCHO)_n$. When Paraformaldehyde U. S. P. is heated, formaldehyd and some sublimed paraformaldehyd are given off. As the amount of moisture, temperature, yield of formaldehyd vapors, etc., are important factors when estimating efficacy of formaldehyd vapors, it is not practical to state the relative effectiveness as ordinarily employed. The amounts recommended by various manufacturers for use of paraformaldehyd should be approximately the same; in the case of solidified formaldehyd, the concentration of the formaldehyd and the amount of vapor evolved must be known before making even approximate estimations of the relative efficiency. The fact is, fumigation as a means of preventing the spread of disease is regarded of far less importance than formerly. For the last fifteen years (THE JOURNAL, Jan. 15, 1916, p. 209) the value of routine fumigation of rooms has been questioned by health authorities; in many cities terminal disinfection has been omitted, without evidence of notable increase in the number of secondary cases.

There is ground for believing that the share of inanimate objects in spreading disease is not so great as at one time supposed, and that the available evidence indicates that pathogenic bacteria discharged from the body die off rather quickly under the influence of drying, oxygen and sunlight (THE JOURNAL, April 15, 1922, p. 1149).

Fumigation in tuberculosis was discussed in Queries and Minor Notes, THE JOURNAL, Sept. 12, 1925, p. 845.

DRINKING ALCOHOL U. S. P.

To the Editor:—Will you kindly advise me if a patient drinks pure alcohol U. S. P., is it more harmful or less harmful if properly diluted in his stomach with distilled water than a similar quantity of alcohol consumed in "Bottled in Bond Whisky"? In other words, is alcohol (pure) any more harmful diluted with water than a similar amount drank in bonded whisky?

J. B. WILLIAMS, M.D., Los Angeles.

ANSWER.—Pure alcohol properly diluted is no more harmful than whisky consumed in similar quantity and concentration; it is indeed less harmful than insufficiently aged whisky. There is a possibility that some of the "ethers" contained in whisky might impart to it a somewhat greater "stimulating" value; but this effect, if present, is merely evanescent, and the residual effect is essentially the same as that obtained by an equivalent amount of alcohol.

WHITE SPOTS ON FINGER NAILS

To the Editor:—Will you kindly tell me the cause of "white spots" occurring in the finger nails? Has this condition any clinical significance? I have a patient who is suffering from an acute articular rheumatism who tells me that these "white spots" always appear soon after the onset of the rheumatic condition. I should like to know if there is any relation between these two conditions. Please omit my name.

M.D., Illinois.

ANSWER.—White spots of the finger nails, or leukonychia, are due to the presence of air between the layers of the nail plate. This condition is most frequently the result of traumatism, but occurs not infrequently without any apparent cause. Changes in the nail are seen occasionally in association with rheumatism, but usually in the form of pitting of the nail.

Medical Education, Registration and Hospital Service

COMING EXAMINATIONS

ALASKA: Juneau, March 2. Sec., Dr. Harry C. De Vighne, Juneau.

CALIFORNIA: Los Angeles, March 8-11. Sec., Dr. Charles B. Pinkham, Room 906, Forum Bldg., Sacramento.

CONNECTICUT: Hartford, March 9-10. Sec., Dr. Robert L. Rowley, 79 Elm St., Hartford. Homeo. Board, New Haven, March 9. Sec., Dr. Edwin C. M. Hall, 82 Grand Ave., New Haven.

IDAHO: Boise, April 6. Commissioner of Law Enforcement, F. A. Jeter, Boise.

MAINE: Portland, March 9-10. Sec., Dr. Adam P. Leighton, Jr., 192 State St., Portland.

MASSACHUSETTS: Boston, March 9-11. Sec., Dr. Frank M. Vaughan, 144 State House, Boston.

MISSOURI: Jefferson City, March 9-11. Chief, Licensure, Dr. Ross Hopkins, Capitol Bldg., Jefferson City, Mo.

MONTANA: Helena, April 6-8. Sec., Dr. S. A. Cooney, Helena.

NEW HAMPSHIRE: Concord, March 11-12. Sec., Dr. Charles Duncan, Concord.

OKLAHOMA: Oklahoma City, March 9-10. Sec., Dr. J. M. Byrum, Shawnee.

PORTO RICO: San Juan, March 2. Sec., Dr. D. Biascoechea, Box 804, San Juan.

California October Examination

Dr. Charles B. Pinkham, secretary of the California Board of Medical Examiners, reports the written examination held at Sacramento, Oct. 19-22, 1925. The examination covered 9 subjects and included 90 questions. An average of 75 per cent was required to pass. Of the 56 candidates examined, 47 passed and 9 failed. Seventy-nine candidates were licensed by reciprocity and 1 by endorsement of credentials. The following colleges were represented:

College	PASSED	Year Grad.	Per Cent
College of Medical Evangelists		(1925)	79.4
College of Physicians and Surgeons, San Francisco		(1906)	77.4
University of California Medical School		(1910) (1924) 88.7, (1925) 79	83.9,
George Washington University Medical School		(1925)	88.8
Northwestern University Medical School		(1922)	79.1
Rush Medical College		(1923)	82.9
University of Illinois College of Medicine		(1925)	84, 86.2
Indiana University School of Medicine		(1925)	79.2
State University of Iowa College of Medicine		(1924)	83.7
Tulane University of Louisiana School of Medicine		(1925)	82.4, 85.8
Johns Hopkins University Medical Department		(1922)	81.2
Harvard University		(1923) 81.3, 83.4, (1925)	84
University of Michigan Medical School		(1924)	77.2, 86.7
St. Louis College of Physicians and Surgeons		(1923)	78.4
Washington University School of Medicine		(1925)	78.3
University of Buffalo Department of Medicine		(1924)	82.3
University of Oregon Medical School		..(1924) 75, (1925)	75.4, 87.9
University of Pennsylvania School of Medicine		(1923)	82.4, 89,
		(1924) 80.4, (1925) 90.7	
University of Tennessee College of Medicine		(1924)	75
University of Toronto Faculty of Med.		.(1914) 89.1, (1923)	84.4
Western University Faculty of Medicine		(1908) 85.6, (1922)	76.7
University of London, England		(1909)	81.8
University of Berlin, Germany		(1921)* 79.6, 1922)	85.7
University of Leipzig, Germany		(1923)*	84.9
University of Munich, Germany		(1918)*	82.6
National University, Athens, Greece		(1913)*	75.7
University of Dublin, Ireland		(1924)	88.4
Literary and Scientific Institute, School of Medicine of San Luis Potosi, Mexico		(1920)*	78.8
University of St. Vladimira, Kief, Russia		(1915)*	80.9
University of Tomsk, Russia		(1913)*	75.8
University of Edinburgh, Scotland		(1923)	93.2
University of Geneva, Switzerland		(1910)*	86.6

College	FAILED	Year Grad.	Per Cent
College of Medical Evangelists		(1925)	77
McGill University Faculty of Medicine		(1886)	63
University of Heidelberg, Germany		(1923)*	67.7
University of Göttingen, Germany		(1923)*	64
National University, Athens, Greece		(1923)*	55.7
University of Budapest, Hungary		(1922)*	60.7
University of Rome, Italy		(1916)*	53
National School of Medicine, Mexico		(1924)*	70
School of Medicine and Surgery, Lisbon, Portugal		(1923)*	54.1

College	LICENSED BY RECIPROCITY	Year Grad.	Reciprocity with
University of Arkansas Medical Department		(1912)	Arkansas
Georgetown University School of Medicine		(1909) (1923)	Hawaii District of Columbia
Chicago Homeopathic Medical College		(1903)	Illinois
Chicago College of Medicine and Surgery		(1914)	Iowa
College of Physicians and Surgeons, Chicago		(1890)	Illinois
Northwestern University Medical School		(1904), (1915)	Illinois
Rush Medical College		(1898) Wyoming, (1904) Montana, (1909) Illinois, (1910) Oregon, (1912) Utah	Oregon
Keokuk Medical College, Coll. of Phys. and Surgs.		(1903)	Iowa
State University of Iowa College of Medicine		(1913)	Iowa
Kentucky University Medical Department, Louisville		(1906)	Philip. Isl.
University of Louisville School of Medicine		(1909)	Missouri
Tulane University of Louisiana School of Medicine		(1907)	Louisiana
Baltimore Medical College		(1901) Oregon, (1902)	W. Virginia
College of Physicians and Surgeons, Baltimore		(1903)	Penna.
Harvard University		(1923)	New York
Tufts College Medical School		(1909)	Mass.
Michigan College of Medicine and Surgery		(1901)	Montana
University of Michigan Medical School		(1918), (1921)	Michigan
Medical Department, Hamline University		(1904)	Minnesota
Central Medical College of St. Joseph		(1904)	Nebraska
Ensworth Medical College, St. Joseph		(1908)	Kansas
Kansas City Hahnemann Medical College		(1912)	Kansas
St. Louis College of Physicians and Surgeons		(1908)	Missouri
St. Louis University School of Medicine		(1914)	Missouri
Washington Univ. School of Med.		(1911) Missouri, (1919)	W. Virginia
Creighton Medical College		(1924)	Nebraska
John A. Creighton Medical College		(1908) S. Dakota, (1909)	Nebraska
Lincoln Medical College, Eclectic, Lincoln		(1911)	Nebraska
University of Nebraska Coll. of Med.		(1904) Iowa, (1924)	Nebraska
Albany Medical College		(1910)	New York
Cornell University Medical College		(1924)	New York
New York Med. Coll. and Hosp. for Women, Homeo.		(1901)	New York
Syracuse University College of Medicine		(1913)	New York
University and Bellevue Hospital Medical College		(1921)	New York
University of Buffalo Department of Med.		(1904), (1921)	New York
Eclectic Medical Institute, Cincinnati		(1896)	Idaho
Ohio State University Coll. of Med.		(1917) Colorado, (1924)	Ohio
University of Oklahoma School of Medicine		(1918)	Idaho
University of Oregon Medical School		(1907), (1924)	Oregon
Jefferson Medical College of Philadelphia		(1906), (1912) (1916)	Penna. Wisconsin
Univ. of Pennsylvania School of Med.		(1905) Penna. (1921)	Minnesota
Meharry Med. College		(1917) Texas, Louisiana, (1920)	Oklahoma
University of Tennessee College of Medicine		(1924)	Tennessee
Vanderbilt University School of Medicine		(1921), (1924)	Tennessee
Fort Worth School of Medicine		(1910), (1911), (1918)	Texas
University of Texas Department of Medicine		(1923)	Texas
University of Vermont College of Medicine		(1904)	Vermont
Marquette University School of Medicine		(1913)	Wisconsin
Milwaukee Medical College		(1910)	Wisconsin
Trinity Medical College, Toronto		(1884)	Nevada
McGill Univ. Faculty of Med.		(1900) Washington, (1906)	Maine
Nippon Special Medical School, Tokyo, Japan		(1924)*	Texas
Osaka Prefecture Higher Medical School		(1914)*	Nevada
University of St. Vladimira, Kief, Russia		(1900)*	Illinois
American University Medical School, Beirut, Syria		(1888)	Mass.

College	ENDORSEMENT OF CREDENTIALS	Year Grad.	Endorsement with
University of Virginia Department of Medicine		(1916)	U.S.P.H.S.

* Verification of graduation not yet completed by the American Medical Association.

Book Notices

SURGICAL TECHNIQUE. Edited by Emmet A. Printy, M.D. Leather. Price, $8. Pp. 305, with illustrations. Chicago: The Laboratory of Surgical Technique of Chicago, 1925.

This is not intended as a textbook of operative surgery but was prepared in response to requests from those who have taken the postgraduate work of the organization that publishes it. The work is divided into nine sections. The first section, contributed by Printy, deals with general operative technic, covering some general remarks, hemostasis, suture and ligature materials, and the tying of knots, and ends with a discussion of abdominal incisions and methods of closure. The second section deals with operations on the intestine. Surgical anatomy of the small intestine is described by Robert E. Dyer. Printy then adds some general remarks and a discussion of resection of the small intestine, including lateral and end-to-end anastomosis, enterostomy and the use of the button. William J. Pickett concludes the chapter with a discussion of appendectomy, colostomy and colectomy. The third section deals with operations on the stomach. Operations for gastric and duodenal ulcer are described by Alfred A. Strauss, while Printy describes gastrojejunostomy and partial gastrectomy. The fourth section deals with operations on the gallbladder and bile ducts. This is contributed by Printy. The fifth section takes up inguinal hernia, by Printy, and femoral hernia, by Edmund Andrews. The sixth section, operations on the kidney and ureter, is contributed by Daniel N. Eisendrath. The seventh section, covering operations on the breast, and skin grafting, is written by Oscar E. Nadeau. The eighth section discusses operation on the thyroid gland, and tracheotomy. This begins with a discussion of thyroidectomies under local anesthesia, by Francis T. H'Doubler, and then Printy describes thyroidectomy, polar ligations and tracheotomy. The concluding section deals with operations on the blood vessels, and consists chiefly of a discussion on blood transfusion by Nelson M. Percy, and a short account of blood vessel anastomosis by William J. Pickett. The material

covered is well presented and the text is greatly enhanced by the exceptionally clear and well drawn illustrations by Shepard. The book presents an excellent appearance, being well printed on heavy glazed paper. The binder is sufficiently large to hold double the present material. Each section is paged separately, and there is no index, save for the table of contents, which merely mentions the subjects covered in the section, without giving any page reference. If more sections are added in the future, it will be necessary to add an index. This volume recalls the operative surgery written by Axhausen, and the one written by Schmieden, in Germany, who presented in book form their courses in operative surgery on dogs and cadavers, given essentially for American students. There is a definite place in surgical literature for books of this type, and Printy is to be commended for having undertaken the work.

DIE LUNGENTUBERKULOSE, IHRE PATHOGENESE, DIAGNOSTIK UND BEHANDLUNG. Von Dr. med. Felix Klemperer, a. o. Professor an der Universität, Geh. San.-Rat, ärztl. Direktor des städt. Krankenhauses Berlin-Reinickendorf. Third edition. Paper. Price, 10.80 marks. Pp. 239, with 25 illustrations. Berlin: Urban & Schwarzenberg, 1925.

At a time when German medical literature is flooded with new tuberculosis remedies, and the young general practitioner must wade helplessly in a turmoil of bizarre therapeutic innovations, it is a pleasure to see that a veteran in the field may come through the welter uncontaminated. Klemperer's third edition is a sane compilation, the chief value of which lies in the conservatism with which the new remedies are treated. The author has no new system of his own to offer, nor does he champion the system of some one else. Nearly half the book is devoted to the treatment of tuberculosis in all its branches. Hygienic and dietetic management is considered of first importance. Brehmer's rule still holds: "Well people sit down when they are tired; consumptives sit down so that they won't become tired." Klemperer believes also in the basic soundness of tuberculin therapy, but fails to see that recent modifications surpass the old methods in value. After reviewing the literature on the numerous cutaneous and percutaneous methods of administration, and analyzing his own experience with the preparations used in these methods, he is unable to see any advantage over the old subcutaneous procedure. The partigens of Much fare no better. In spite of the colossal literature on this subject, Klemperer finds no reason for abandoning old tuberculin in favor of the partigens. The Friedmann turtle bacillus method and nonspecific protein therapy are likewise found wanting. Several gold cures are mentioned, and it is interesting to note that after personal experience Klemperer feels that the Møllgaard "Sanocrysin" treatment does not represent an advance. Symptomatic and surgical treatment are also discussed. Pneumothorax is considered in detail, and extrapleural thoracoplasty is accorded a page of small type. The first half of the book deals with classification, pathogenesis and diagnosis. Pathogenesis is discussed in terms of the classification popularized by Aschoff, in which pulmonary tuberculosis is divided into two prominent types, exudative and proliferative. Prognosis and diagnosis are defined in terms of these two types. The roentgen-ray differentiation is outlined with the aid of plates. The press work is good. The book is well indexed.

BIRTH CONTROL. Facts and Responsibilities. A Symposium Dealing with this Important Subject from a Number of Angles. Edited by Adolf Meyer, M.D. Cloth. Price, $3. Pp. 157. Baltimore: Williams & Wilkins Company, 1925.

This is a collection of papers presented at the birth control conferences in Baltimore and Chicago in 1923. It is a useful and thought-provoking book. Its authors are not a group of wild-eyed radicals. Among the contributors are Adolf Meyer, Raymond Pearl and Reynolds A. Spaeth, professors in Johns Hopkins University; E. A. Ross, professor at the University of Michigan; C. C. Little, president of the University of Maine, recently called to the presidency of Michigan, and E. M. East, professor in Harvard College—men who face facts, not as they would have them or as we like to think they are, but as they are, and who are capable of drawing deductions from them. The topics considered should be of interest to serious minded men. For example, Pearl and East present the subject of the food problem in relation to the earth's future population, the subject whose all importance Malthus showed, but whose predictions we like to think were not correct because they have been postponed. Those who think that through some *deus ex machina*, such as getting protein out of the air and sugar and alcohol out of sawdust, the problem of feeding the future population of the United States, no matter how great, can be passed over with a wave of the hand as one that will easily solve itself, or who think that the thousands of miles of unoccupied lands of the West will in future meet this problem, regardless of the fact of their aridity, should find subject for thought in such presentations as the articles here by Pearl and East. And it is to be hoped that they will be stimulated to read further writings of the same and other authors on this subject. The ethical aspects of birth control, its social problems, and the relation of sex to mental hygiene are handled sanely and wisely by other writers. Intellectual honesty and for the most part intellectual courage show throughout the book. It is refreshing, for example, in contrast to the cant that is constantly uttered about sex, to see a statement by East like this: "No scientist familiar with the recent facts of neuropathology as to the ill effects of too stern a repression of the sex impulse could for a moment advocate the former [temporary celibacy in marriage]." The question of birth control is one of the most far-reaching social importance. It is having the consideration of leaders of thought. It is a problem in which medicine is involved and to which medicine should give more attention than it has heretofore done. Physicians should approach the subject without prejudice, and they should become informed on it. This little book, authoritative and readable as it is, is an introduction to the subject which can be highly recommended.

PITFALLS OF SURGERY. By Harold Burrows, C.B.E., M.B., B.S., Surgeon at the Gosport War Memorial Hospital. Second edition. Cloth. Price, $4.50. Pp. 525. New York: William Wood & Co., 1925.

This extensive recital of errors during surgical operations or resulting from them has been undertaken by the author in an effort to help, particularly, the younger surgeon. This work is limited largely to occurrences in the author's own experience. The records are reviewed in an interesting manner, and they reflect the personality of the writer throughout. They are taken up systematically according to the standard operations on the various parts of the body. In order to make his account more complete, the author cites a certain number of cases from the literature. Throughout the work, suggestions are made for avoiding surgical mistakes. The author believes that to a large extent these errors may be due to ignorance, carelessness, poor judgment and defective technic. While it is evident that avoidance of many of these mistakes is possible, this depends largely on fundamental medical knowledge, persistent efforts to approach the highest standards, and good judgment.

MODERN VIEWS ON THE TOXÆMIAS OF PREGNANCY. By O. L. V. de Wesselow, M.B., F.R.C.P., Chemical Pathologist, St. Thomas's Hospital, and J. M. Wyatt, M.B., F.R.C.P., Obstetric Physician in Charge of Out-Patients, St. Thomas's Hospital. Cloth. Price, $3. Pp. 99. New York: Paul B. Hoeber, Inc., 1925.

The primary object of this monograph is to provide the general practitioner with a short and concise account of the modern views on the toxemias of pregnancy. The authors have succeeded in carrying out their aim, but the value of the book is considerably diminished by the absence of a bibliography. Among the toxemias of pregnancy the authors discuss hyperemesis gravidarum, eclampsia, pre-eclampsia and nephritic toxemia. The etiology, symptomatology, therapy and prognosis of the toxemias are discussed, and also the methods of examination utilized in determining renal and hepatic function. In the discussion of the treatment of pernicious vomiting, the authors fail to mention such valuable aids as the duodenal tube, the intravenous use of glucose, and insulin. Ways of differentiating between nephritis and pre-eclamptic toxemia are given, and on page 91 there is a table for this purpose. However, the unreliability of this table is evidenced by the almost constant use of such terms

as "sometimes," "frequently," "may be," and "tends to be." Unfortunately, we have as yet no certain tests by which we can distinguish between pre-eclamptic and nephritic toxemia during pregnancy and labor. The diastatic index of the urine, a test on which the authors lay great emphasis, is little used in this country. The book undoubtedly serves a useful purpose and should be of benefit to the general practitioner.

IMMUNISATION LOCALE PANSEMENTS SPÉCIFIQUES. Par A. Besredka, Professeur a l'Institut Pasteur. Paper. Price, 20 francs. Pp. 252. Paris: Masson et Cie, 1925.

In experimental studies of anthrax, staphylococcus, streptococcus, dysentery and typhoid infections which primarily affect skin or mucous membranes, protection is obtained by local injections or applications of bacterial vaccines or culture filtrates. These results accord with certain clinical and epidemiologic features of the diseases, and are ascribed to a local immunity. This immunity is regarded as an outcome of a previous local susceptibility, or cell receptivity, and according to Besredka's observations there are no accompanying demonstrable antibodies in the blood serum. Considerations of the theories and work on general immunity and antibody formation, whose omission here achieves unmolested clarity, might not, however, preclude the described reactions as part of the general response of the organism.

SOME ENCOURAGEMENTS IN CANCER SURGERY. By G. Grey Turner, F.R.C.S., Honorary Surgeon, Royal Infirmary, Newcastle-upon-Tyne. Cloth. Price, $3.50. Pp. 75, with 40 illustrations. New York: William Wood & Co., 1925.

The material for this book was collected for a lantern demonstration and clinical report. Favorable results in a number of cases stimulated the author to follow up as many as possible of the patients, operated on for cancer in various regions of the body. There are excellent drawings of the gross specimens removed at operation. The author found a number of patients free from recurrence after many years although they had been considered hopeless before operation. This has encouraged him to operate in many cases of cancer in spite of the large size and the local extension. He emphasizes the importance of early diagnosis and thorough operation while the disease is still local, and believes that surgery offers the best chance for relief in most cases.

MINOR SURGERY. By Lionel R. Fifield, F.R.C.S., Surgical First Assistant and Registrar, London Hospital. Cloth. Price, $4.50. Pp. 431, with 271 illustrations. New York: Paul B. Hoeber, Inc., 1925.

As the subject of minor surgery has heretofore been treated as a minor matter, this volume is a welcome and valuable addition to surgical literature. The author is evidently a master of his subject and a clear, logical writer. Although a small volume, as surgical textbooks go, it covers the field thoroughly. Particularly well written are the chapters on fractures and on infection of the hand. The information throughout is of a most practical kind and is thoroughly up to date. The illustrations are by no means elaborate, but serve the purpose of aiding the text. The book should prove of particular value to the student in his surgical dispensary, to the intern in his surgical service, and to the industrial surgeon.

SEX AT CHOICE. By Mrs. Monteith Erskine. With an Introduction by James Monteith Erskine, M.P. for the St. George's Division of Westminster. Cloth. Price, $2.50. Pp. 187, with 1 illustration. New York: G. P. Putnam's Sons, 1925.

The author holds that sex of the offspring is determined by the ovary that produces the egg, the right giving rise to males and the left to females. Alternate ovulation, of course, gives alternate sterile months for each ovary, and lateral decubitus aids in the semen entering the proper oviduct. Woman is considered different from lower animals in the specificity of sexually different ovaries. Enough evidence against this theory has already been published, and one can but wonder if all the work on sex chromosomes and the dimorphic sperms of the human being are to be ignored. Such statements as "The male, according to science, is not a sex determining begetter" does not coincide well with the refined cytologic work of Weniwarter and of Oguma and Kihara.

Books Received

Books received are acknowledged in this column, and such acknowledgment must be regarded as a sufficient return for the courtesy of the sender. Selections will be made for more extensive review in the interests of our readers and as space permits.

PUBLIC HEALTH LAW. A manual of law for sanitarians. By James A. Tobey, M.S., LL.B., Lecturer on Public Health Law at the Massachusetts Institute of Technology, Yale School of Medicine, and Columbia University. Cloth. Price, $4.50. Pp. 304. Baltimore: The Williams & Wilkins Company, 1926.

The legal phases of public health administration are discussed, with references to 500 cases.

BIOLOGICAL STAINS. A handbook on the nature and uses of dyes employed in the biological laboratory. By H. J. Conn, Chairman, Commission on Standardization of Biological Stains. Prepared with the collaboration of J. A. Ambler, S. I. Kornhauser, F. B. Mallory and L. W. Sharp. Cloth. Price, $2.50. Pp. 151, with illustrations. Geneva, N. Y.: The Commission, 1925.

A history of stains used in medical investigation, their preparation and uses.

NOT SPEAKING OF OPERATIONS. By John Finch Barnhill, F.A.C.S. Cloth. Price, $2. Pp. 159. Boston: Stratford Company, 1925.

An attempt to present the happier aspects of the life of the patient who has had a surgical operation.

LIGHT AND HEALTH. By M. Luckiesh, Director, Lighting Research Laboratory National Lamp Works of General Electric Company, and A. J. Pacini, Director, Department of Biophysical Research, Victor X-Ray Corporation of General Electric Company. Cloth. Price, $5. Pp. 302, with 31 illustrations. Baltimore: Williams & Wilkins Company, 1926.

An attempt to define the present status of light therapy with a not too critical discussion of the available literature.

ACUTE INFECTIOUS DISEASES. A handbook for practitioners and students. By J. D. Rolleston, M.A., M.D., Senior Assistant Medical Officer, Grove Fever Hospital, London. Cloth. Price, $5. Pp. 376. New York: Physicians & Surgeons Book Company, 1925.

Well written and practical work based on personal clinical experience.

MUSCULAR ACTIVITY (The Herter lectures for 1924). By Archibald Vivian Hill, M.A., Sc.D., F.R.S., Professor of Physiology, University College, London. Cloth. Price, $2.75. Pp. 115, with illustrations. Baltimore: Williams & Wilkins Company, 1926.

Dynamics, physiology and functional studies of muscle action.

STATISTICAL ANALYSIS. By Edmund E. Day, Professor of Economics, School of Business Administration, University of Michigan. Cloth. Price, $4. Pp. 459, with illustrations. New York: Macmillan Company, 1925.

A sound work but somewhat too detailed and technical for the average physician.

ANNUAL REPORT OF THE SURGEON GENERAL OF THE PUBLIC HEALTH SERVICE OF THE UNITED STATES. For the fiscal year 1925. Cloth. Pp. 314, with illustrations. Washington: Government Printing Office, 1925.

Reviewed under Medical News and in *Hygeia*.

WUNDERHEILUNGEN UND ÄRZTLICH SCHUTZPATRONE IN DER BILDENDEN KUNST. Von Dr. Oskar Rosenthal. Boards. Price, 24 marks. Pp. 42, with 102 illustrations. Leipsic: F. C. W. Vogel, 1925.

A collection of reproductions of paintings showing miraculous healings.

MEISTER DER HEILKUNDE. Herausgegeben von Prof. Dr. Max Neuburger. Band 7. Max Pettenkofer. Von Dr. Otto Neustätter, Ehemaliger Direktor des Historisch-Ethnologischen Hygiene-Museums in Dresden. Boards. Price, 3.60 goldmarks. Pp. 93, with 1 illustration. Vienna: Julius Springer, 1925.

A sympathetic biography of the professor of hygiene.

DIAGNOSTISCHE UND THERAPEUTISCHE IRRTÜMER UND DEREN VERHÜTUNG CHIRURGIE. Herausgegeben von Prof. Dr. J. Schwalbe, Geh. San.-Rat in Berlin. Siebentes Heft. Verletzungen und chirurgische Krankheiten der Mund- und Rachenhöhle, des Halses einschl. der Speicheldrüsen, der Speiseröhre, des Kehlkopfes und der Trachea. Von Prof. Dr. Paul Clairmont, Vorstand der chirurgischen Klinik in Zurich. Paper. Price, 8.10 marks. Pp. 188, with 97 illustrations. Leipsic: Georg Thieme, 1926.

Monographic study, profusely illustrated, of the surgery of the mouth and upper respiratory tract.

Medicolegal

Statements of Injured Person as Basis of Opinion

(Sund v. Chicago, R. I. & P. Ry. Co. (Minn.), 204 N. W. R. 628)

The Supreme Court of Minnesota, in reversing an order which denied the defendant's motion for a new trial after the plaintiff had been given a verdict for $22,000 for damages for personal injuries, says that a physician who had examined the plaintiff in order to be a witness in his behalf gave, over the defendant's objection, an expert opinion based in part on statements made to him by the plaintiff. The physician stated that the plaintiff said that one of his complaints was that he couldn't remember anything; had lost his memory; couldn't remember people he had known well; that he was slipping; couldn't think clearly; also mentioned not remembering a nurse, while he was in the hospital.

It is the settled law in Minnesota that mere descriptive statements of a sick or injured person as to the symptoms and effects of his malady are admissible only under the following circumstances: First, they must have been made to a medical attendant for the purpose of medical treatment. Second, they must relate to existing pain or other symptoms from which the patient is suffering at the time, and must not relate to past transactions or symptoms, however closely related to the present sickness. Third, such statements are admissible only when the medical attendant is called on to give an expert opinion based in part on them. There are three reasons why the reception of the expert opinion of the physician mentioned above was erroneous—the statements were not made for the purpose of medical treatment; they did not relate exclusively to the present; the witness was not a "medical attendant."

If the witness is not to give an expert opinion, the statements are the same as if made to a layman. They are self-serving and hearsay. Not being the medical attendant, he cannot disclose the descriptive statements. To permit a physician to give his opinion based on the record in this case would be to have an expert opinion based on supposed facts, resting only on hearsay, and not supported by an oath. The exception to the general rule was in recognition of a strong probability that a person who made statements to his medical attendant for the purpose of treatment would tell the truth as to his existing pain and suffering. Under such circumstances there is a strong inducement for the patient to speak truly of his malady, while it may be otherwise when medically examined for the purpose of creating evidence in his own behalf. Hence the statements expressive of present conditions are permitted to be given as evidence only when made to a physician for the purpose of treatment by him.

But the declarations of a party himself, to whomsoever made, are competent evidence when they are expressive of existing pain or suffering. Such are regarded as exclamations or complaints which are the spontaneous manifestations of distress. But descriptive statements of existing pain or suffering are admissible only when made to a medical attendant for the purposes of medical treatment. These descriptive statements, not coming within the exception, were self-serving as well as hearsay.

Father Required to Pay Incurred Medical Expenses

(Jaeger v. Jaeger (Calif.), 238 Pac. R. 139)

The District Court of Appeal of California, first district, division 1, in affirming a judgment in favor of the plaintiff, says that when she was granted a divorce from the defendant she was awarded the custody of their only child, and the defendant was ordered to pay her $100 a month for her support and $30 a month for that of the child. Thereafter the child was taken ill and the plaintiff incurred expenses amounting to $993.85 for the services of physicians and nurses and for medicines. This action was then brought to recover that sum. It was not denied that the services or medicines were necessary, and the charges therefor reasonable; or that, had the application been made before the services and medicines were furnished, the court, the necessity appearing, would have had authority to make the order; but it was contended that, the services and medicines having been procured in advance, the court was without power to make an order directing payment by the guardian who had been appointed of the estate of the father, on account of the latter's being an incompetent person. Section 138 of the Civil Code of California, as amended in 1905, provides that

> In actions for divorce the court may, during the pendency of the action, or at the final hearing or at any time thereafter during the minority of any of the children of the marriage, make such order for the custody, care, education, maintenance and support of such minor children as may seem necessary or proper, and may at any time modify or vacate the same.

Based on the provisions of that section, the court, after due notice and hearing, made its order directing the guardian to pay to the plaintiff from the estate of the defendant in the due course of administration thereof $993.85, as and for the maintenance and support of the minor, in addition to the monthly payments theretofore ordered. It is the opinion of the district court of appeal that, in view of the purpose to protect the interests of the children and to enforce the obligations of the parents, a reasonably liberal construction of the language of the section as amended leads fairly to the conclusion that the order appealed from in this case was authorized by the section.

Immunities of Hospitals and Universities—Theories

(Hamburger v. Cornell University (N. Y.), 148 N. E. R. 539)

The Court of Appeals of New York, in affirming a judgment of the appellate division, which reversed one that was rendered in favor of the plaintiff, says that the plaintiff was injured by the explosion of chemicals while a student in a chemical laboratory in the defendant university. The appellate division held that the defendant was immune from liability to its students for the negligence of its administrative servants as well as of its teachers, and this though incompetent servants had been negligently chosen.

Cornell University is a charitable institution. As such, in its relation to its students, it has the benefit of certain immunities not shared by institutions organized for profit. The subject has had its chief consideration in actions against hospitals. Through such litigation, the rule is settled in New York State, and generally elsewhere, that a hospital, if public or charitable, is not liable for the negligence of its surgeons or physicians in the treatment of its patients. The question is still open whether it is liable to patients for the negligence of servants or administrative agents. The exemption from liability for the acts of surgeons or physicians arises from the nature of the enterprise or undertaking in which the hospital is engaged, and the implications of the contract between its patients and itself. Such a hospital undertakes not to heal or attempt to heal through the agency of others, but merely to supply others who will heal or attempt to heal on their own responsibility. Physicians and surgeons are employed by the hospital to exercise their profession and calling to the best of their abilities according to their discretion. A patient resorting to the hospital gains the benefit of facilities that would not otherwise be available. If these are furnished, he has no other remedy for the errors of surgeons or physicians, carefully selected, who have given him treatment in a ward than he would have if the same men on recommendation of the hospital had given him treatment at his home. By fair implication he must look to them alone.

This court thinks that a hospital's immunity from liability for the errors of surgeons and physicians is matched in the case of a university by a like immunity from liability for the errors of professors or instructors or other members of its staff of teachers. There is, indeed, a duty to select them with due care. That duty fulfilled, there is none to supervise day by day the details of their teaching. A university is not to answer in damages because false or pernicious doctrine is imparted to its students in laboratory or clinic,

or because a warning of the danger of some experiment has been inadvertently omitted, or because, either in performing the experiment or in supervising it a teacher has combined the wrong ingredients or allowed them to be combined by others. This court finds no adequate distinction between the negligent use of a chemical in the course of an experiment and its negligent use or handling in preparation for an experiment. As well might one say that a surgeon would involve a hospital in liability if he failed, while preparing for an operation, to sterilize his instruments, though he would involve himself alone if guilty of a like omission while the operation was in progress.

Massachusetts adopts what is commonly known as the trust fund theory as the basis for the exemption from liability of charitable institutions. An immunity so grounded admits of no exception. In New York State, however, the trust fund theory has been rejected. In New York State a hospital or university owes to patients or to students whatever duty of care and diligence is attached to the relation as reasonably implicit in the nature of the undertaking and the purpose of the charity. All that is thus included is not susceptible of enumeration in advance of the event. It cannot be less, however, than appropriate investigation of the character and capacity of the agencies of service from the highest to the lowest. This is a duty that devolves on the corporation itself, and one not to be shaken off by delegation or surrender. A holding to that effect has support in an overwhelming preponderance of authority. For present purposes, this court assumes without deciding that the defendant is liable in like degree to students and to strangers for the negligence of servants; but no evidence in the record gave support to the conclusion that there was any such default in this case.

Damages for Injuries and Subsequent Heart Block

(McEachran v. Rothschild & Co., Inc. (Wash.), 237 Pac. R. 711)

The Supreme Court of Washington, in affirming a judgment for $35,000 damages in favor of the plaintiff, says that the defendant complained that the amount awarded was excessive. The plaintiff was unquestionably severely injured by being struck with great force by a piece of timber, and some of the injuries, apart from one to be mentioned, were of a permanent character. But they were not of such a character as to prohibit the plaintiff from engaging in all gainful callings, and did not, in the court's opinion, justify the very large verdict which the jury returned. But the evidence showed that in the November following the February in which the accident happened the plaintiff developed a heart block which possibly utterly incapacitated him from pursuing any gainful calling. It was given in testimony by the medical witnesses that the pulsations of his heart ranged from 26 to 32. He was subject to fainting spells, and could not safely walk the streets without an attendant. All the medical witnesses agreed that his condition was serious, lending no hope of actual cure, and not much of alleviation; and all agreed that the condition either could be caused, or, if latent, could be rendered acute, by the injury. In the light of these conditions, this court does not feel that it would be warranted in interfering with the verdict. A jury must be the final arbiter, and this court feels that there is but little reason for concluding that another jury would return a verdict for a less amount.

Employee Justified in Selecting Physician

(Gardner v. Michigan Sugar Co. et al. (Mich.), 204 N. W. R. 109)

The Supreme Court of Michigan says that the plaintiff suffered an accidental injury to his lip while working for the sugar company. A severe infection of the face and neck developed, and he was sent by his employer to a physician who had been designated by the company to treat its injured employees. The physician was away hunting, but his brother, who was also a physician, examined the lip, gave the plaintiff some medicine, and told him to return the next day, at which time he sent him to another physician, who treated him for nearly a week. The plaintiff suffered great pain, was not able to sleep, and did not seem to be making satisfactory progress under the treatment. He consulted his family physician, who advised him to notify the company that he had gone to another physician. He notified the manager of the company by letter, but received no reply. His family physician treated him for nearly seven weeks, until his recovery, and charged $39 for his services. An award was made, allowing compensation for disability and $39 for medical treatment. Objection was made to the allowance for the services of this physician on the ground that the company did not select him to treat the plaintiff. On the other hand, it was contended that, while the general rule that the employer has a right to select the physician who shall treat an injured employee was not questioned, under the circumstances shown by this record, the plaintiff was warranted in securing the medical attendance of his family physician at the company's expense, and the supreme court agrees with this, and that therefore the award should be sustained.

Privilege Not Waived as to Other Physicians

(Travelers' Ins. Co. v. Fletcher American Nat. Bank of Indianapolis et al. (Ind.), 148 N. E. R. 501)

The Appellate Court of Indiana, division 2, says that, in this action brought by the bank as the assignee of a policy of life insurance, the defendant insurance company contended that the trial court had erred in refusing to permit it to read in evidence the deposition of a certain physician; but that much of the deposition was privileged under the Indiana statute could hardly be questioned, for the physician was, at the time about which he testified, acting as the physician of the insured, giving him medical treatment. However, the defendant insisted that, as the plaintiff had called other attending physicians to testify as to the insured's condition of health, one of whom was in consultation, as to the insured's condition, with the physician who made the deposition, the plaintiff thereby waived its right to claim the statutory privilege as to the physician who made the deposition. But in Indiana it is held that, where a patient or his representatives avail themselves of the evidence of one attending physician, this does not constitute a waiver as to other attending physicians.

Services Rendered on Original Promise

(Pope v. Ellis (Ga.), 129 S. E. R. 11)

The Court of Appeals of Georgia, division 1, in affirming a judgment for the plaintiff, says, in a "syllabus by the court," without any published opinion or further statement of the facts, that, where a physician renders professional services to a minor child of a tenant, solely on the credit of the landlord's promise to pay for such services, the promise is an original and not a collateral undertaking, and is not within the statute of frauds. In the instant case the jury was authorized to find, from the evidence, that the landlord (the defendant) did make, in substance and effect, such a promise. In such a case the jury may find that the promisor is liable for the services of the physician, even though the father of the child treated was ignorant of the contract between the promisor and the physician, and regarded himself as solely liable for such services.

Society Proceedings

COMING MEETINGS

American Association of Pathologists and Bacteriologists, Albany, New York, April 2-3. Dr. H. T. Karsner, Lakeside Hospital, Cleveland, Secretary.

American College of Physicians, Detroit, Feb. 22-29. Dr. Frank Smithies, 920 N. Michigan Ave., Chicago, Secretary.

American Congress on Internal Medicine, Detroit-Ann Arbor, Feb. 22-29. Dr. Frank Smithies, 920 N. Michigan Ave., Chicago, Secretary.

New York, Medical Society of the State of, New York City, March 29-April 1. D. S. Dougherty, 17 W. 43d St., New York City, Secretary.

Oregon State Medical Society, Portland, April 1-2. Dr. F. D. Stricker, Medical Arts Building, Portland, Secretary.

South Carolina Medical Association, Sumter, April 6-8. Dr. E. A. Hines, Seneca, Secretary.

Current Medical Literature

AMERICAN

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Titles marked with an asterisk (*) are abstracted below.

American Journal of Physiology, Baltimore

75: 1-266 (Dec. 1) 1925

*Changes in Blood Sugar Which Follow Experimental Thyroid Feeding. K. G. Hancher, M. Hupper, N. F. Blau and J. Rogers, Ithaca, N. Y. —p. 1.

Effect of Potassium and Calcium on Response of Isolated Frog Heart to Nicotine. W. Salant and H. Washeim, Jr., Augusta, Ga.—p. 6.

Effect of Concentration of Hydrogen Ions on Action of Nicotine. W. Salant, Augusta, Ga.—p. 17.

*Study of Heat Production in Pigeons on Diets Deficient in Vitamin B. C. J. Farmer and H. E. Redenbaugh, Chicago.—p. 27.

Decrease in Digestive Efficiency in Polyneuritis Columbarum. C. J. Farmer and H. E. Redenbaugh, Chicago.—p. 45.

*Comparison of Irritability of Men and Women. E. Williams, Urbana, Ill.—p. 52.

*Effect of Ultraviolet Radiation on Experimental Tetany. W. W. Swingle and J. G. Rhinhold, New Haven, Conn.—p. 59.

Chemical Regulation of Respiration. II. Quantitative Study of Accumulation of Lactic Acid in Isolated Brain During Anaerobic Conditions and Rôle of Lactic Acid as Continuous Regulator of Respiration. D. A. McGinty and R. Gesell, Ann Abor, Mich.—p. 70.

Factors Influencing Rate of Oxygen Consumption in Unicellular Organisms. J. M. Leichsenring, Urbana, Ill. —p. 84.

*Effects Produced by Extracts of Parathyroid Glands on Normal and Parathyroidectomized Dogs. N. F. Fisher and E. Larson, Chicago.—p. 93.

Altered Metabolism of Normal Animals Under Insulin Treatment. E. E. Hawley and J. R. Murlin, Rochester, N. Y.—p. 107.

Biuret-Free Insulin. R. S. Allen and J. R. Murlin, Rochester, N. Y.—p. 131.

Rotation and Acceleration Experiments, Mainly on Frogs. J. Tait, and W. J. McNally, Montreal.—p. 140.

Ablation Experiments on Labyrinth of Frog. W. J. McNally and J. Tait, Montreal.—p. 155.

Plethysmographic Study of Changes in Volume of Spleen in Intact Animal. E. H. Hargis and F. C. Mann, Rochester, Minn.—p. 180.

Effects of Mechanical Obstruction of Hepatic Veins and Peptone Shock. J. P. Simonds and W. W. Brandes, Chicago.—p. 201.

Studies in Vigor. V. Comparative Activity of Male and Female Albino Rats. F. A. Hitchcock, Columbus, Ohio.—p. 205.

Summation of Contractions in Skeletal Muscle. J. F. Fulton, Oxford, England.—p. 211.

Influence of Shortening on Size of Action Current and Duration of Mechanical Response of Skeletal Muscle. J. F. Fulton, Oxford, England.—p. 235.

Inseparability of Mechanical and Electrical Responses in Skeletal Muscle. J. F. Fulton, Oxford, England.—p. 261.

Effect of Thyroid Feeding on Blood Sugar.—Hancher et al. investigated the changes in the sugar content of the blood following the oral administration to dogs of four of the most widely advertised and most commonly used commercial preparations of thyroid, and compared these with a glycerol extract of the hashed fresh pig's gland. They found that the glycerol extract produced a marked and sustained rise in the sugar content of the animal's blood. This was not shown by any of the four commercial preparations. One of these, in fact, showed an immediate and distinct decrease in the blood sugar.

Heat Production on Diets Deficient in Vitamin B.—Two outstanding facts emerging from the work done by Farmer and Redenbaugh in this field are these: During starvation, heat production decreased markedly. The response to food was rapid, the heat production returning to normal in twenty-four hours.

Irritability of Men and Women.—The extent of the knee jerk of sixty-three men and seventy women was compared by Williams. Assuming that the knee jerk is an index to irritability, the data show that women are perceptibly more irritable than men.

Effect of Ultraviolet Ray on Tetany.—Swingle and Rhinhold are of the opinion that the amelioration of tetany symptoms by ultraviolet rays and prolongation of life of parathyroidectomized dogs is probably due to the effect of such irradiation in increasing the absorption and retention of the small amounts of calcium obtained from the food, so that its elimination from the blood and tissues is less rapid than in nonirradiated parathyroidectomized dogs.

Value of Parathyroid Extract in Tetania Parathyreopriva.—Comparatively pure extracts of the active principles of ox parathyroids for the relief of tetania parathyreopriva have been prepared by Fisher and Larson. They found that parathyroidectomized dogs can be kept for a period of at least seven months on a meat diet, provided the acute attacks of tetany are controlled with extracts of parathyroid glands. The acute attacks of tetany usually become less severe and disappear entirely in from one to three weeks when the animals are treated with parathyroid extracts, after which further injections are not necessary, at least during a period of seven months.

Annals of Medical History, New York

7: 319-450 (Dec.) 1925

Max Von Pettenkofer's Theory of Etiology of Cholera, Typhoid Fever and Other Intestinal Diseases. E. E. Hume, Washington, D. C.—p. 319.

Sir Dominic Corrigan. R. T. Williamson, London.—p. 354.

Life and Works of Gilles De Corbeil. S. D'Irsay, New Haven, Conn. —p. 362.

Carl Rokitansky, the Pathologist. F. R. Menne, Portland, Ore.—p. 379.

Power of Sympathy. W. G. A. Robertson, Edinburgh, Scotland.—p. 387.

Crawford Williamson Long. F. L. Taylor, Athens, Ga.—p. 394.

Medical Wisdom of Mark Twain. L. J. Bragman, Syracuse.—p. 425.

Archives of Otolaryngology, Chicago

2: 529-630 (Dec.) 1925

*Fundamentals of Bone Conduction. E. P. Fowler, New York.—p. 529.

*Otomycosis Treated with Potassium Iodide. J. J. Chisolm and A. C. Sutton, Baltimore.—p. 543.

*Concomitance of Sinusitis and Bronchiectasis. E. Raffo, Lima, Peru.—p. 557.

*Pigmented Hairy Nevus of Nose; Pigmented Hairy and Warty Nevus of Cheek and Lip. J. N. Roy, Montreal.—p. 565.

Tumor of Right Internal Auditory Meatus: Involvement of Gasserian Ganglion and Pons. E. W. Hagens, Chicago.—p. 574.

*New Procedure for Postoperative Care of Laryngostomy. H. L. Baum, Denver.—p. 581.

*Tic Douloureux and Trigeminal Neuralgia Relieved by Treatment of Nasal (Sphenopalatine) Ganglion. S. L. Ruskin, New York.—p. 584.

Present Status of Knowledge of Allergy in Relationship to Otolaryngology. W. W. Duke, Kansas City, Mo.—p. 587.

Tuberculosis of Upper Respiratory Tract. G. B. Wood, Philadelphia. —p. 607.

Fundamentals of Bone Conduction.—A simple rational method of measuring both air conduction and bone conduction is described by Fowler. It is based on making the decrement in intensity of tuning fork tone the same for air as for bone conduction (in other words, the damping is made the same for both). This is accomplished by continuing to alternate the placement of the fork between the mastoid and the meatus until the sound ceases to be heard by both. Advantages and variations of the method are noted. Tuning forks should be calibrated so that all tests may be in the same units of measure.

Potassium Iodide in Otomycosis.—Chisolm and Sutton recommend the use of potassium iodide, orally, in cases of otomycosis, beginning with 5 grains (0.3 Gm.) three times a day, and increasing gradually to 15 grains (10 Gm.) or more, three times a day. This course is continued until the symptoms are relieved and the ear is free from discharge. Locally, they prefer a 2 per cent solution of salicylic acid in 70 per cent alcohol, or a 1 per cent solution of mercurochrome-220 soluble. It is important that no water enter the canal at any time, and that no oils or ointments be used in the ear.

Concomitance of Sinusitis and Bronchiectasis.—In Raffo's opinion, the examination of a patient suffering from chronic bronchitis is never complete without a careful investigation of the upper respiratory tract. Of the eight cases cited, many patients did not give definite enough symptoms to arouse suspicion, but a careful investigation showed the existence of sinusitis. Most of the patients complained of coughs dating back to some one of these diseases in child-

hood; hence Raffo believes that the sinus infection occurred at this time, but that the symptoms of sinusitis were overshadowed by the general systemic condition. In cases of bronchiectasis accompanied by sinusitis, the sinuses as well as the lung condition should be given the proper treatment.

Treatment of Pigmented Nevus.—The most rational treatment of pigmented nevi of the face, Roy says, consists first of all in making repeated extirpations of fragments of the skin. When the integuments have attained the maximum of their extension without producing traction on the surrounding parts, it is necessary to have recourse to grafting, preference being given to the dermo-epidermic graft.

Postoperative Care of Laryngostomy.—The object of the device presented by Baum is to prevent contraction of the laryngostomy wound and to maintain a good exposure over a long period of time, as long a period as may be necessary for the proper dilation of the stenosis. The device consists of the addition of a post to the ordinary laryngostomy tube, or, preferably, to the Tucker tube. This post is calculated to fit the laryngostomy incision snugly, and is so designed that the upper end, or saddle, extends from the rubber tube inside the larynx to the skin, this saddle being wide enough to give the necessary "spread" to the upper end of the incision. The tube itself does the same for the lower end, leaving the edges free between these points. Thus, the epithelium grows in and rapidly covers the raw edges of the wound without the necessity, in most instances, of drawing the skin and mucosa together.

Alcohol Injection of Nasal Ganglion in Trigeminal Neuralgia.—Ruskin reports three cases of trigeminal neuralgia in which injection with alcohol of the nasal ganglion through the palatomaxillary canal route gave relief. Although one injection usually produces a marked improvement, and in some cases complete relief, most patients require two or three injections. Alcohol injection is necessarily a temporary affair if the diseased area causing the neuralgia is permitted to remain.

Arkansas Medical Society Journal, Little Rock

22: 151-173 (Dec.) 1925

Faults Responsible for Errors in Diagnosis. S. C. Fulmer, Little Rock.—p. 151.
Who's to Blame for Adverse Medical Legislation? W. H. Abington, Beebe.—p. 153.
Formol-Gel Test Applied to Granuloma Inguinale. H. H. Howze, Little Rock.—p. 159.

Boston Medical and Surgical Journal

193: 1181-1230 (Dec. 24) 1925

New Developments in Public Health. E. R. Kelley, Boston.—p. 1181.
Maternity, Infancy and Early Childhood Clinics or Conferences in Relation to Family Physician. M. Champion, Boston.—p. 1182.
What and Why is Health Examinations? G. H. Bigelow, Boston.—p. 1184.
*Therapeutic Value of Lumbar Puncture in Treatment of Cranial and Intracranial Injury. D. Munro, Boston.—p. 1187.
Acute Intestinal Obstruction in Private Practice. G. A. Moore.—p. 1190.
Torsion of Duodenum from Postoperative and Inflammatory Adhesions. D. Carleton.—p. 1194.
*Cardiorrhaphy. J. H. Long.—p. 1197.
Significance of Acute Abdominal Pain. R. H. Miller.—p. 1201.

Value of Lumbar Puncture in Cranial Injury.—Munro shows that the immediate mortality following all types of head injury, as seen on a surgical service during twelve consecutive months, is lower following treatment by lumbar puncture than by any other method. The greatest difference in comparative group percentages is 12 per cent; the smallest difference is 4 per cent. Ninety-six lumbar punctures were safely done in sixty cases. Necropsies in all but one of the fatal cases proved that the lumbar puncture had no relation to the cause of death. In the one case in which no necropsy was done, this was also clinically true. Comparative data obtained at lumbar puncture in the fatal and nonfatal cases treated only by this method show that the average intracranial pressure is nearly two and one-half times higher in the fatal cases. Regardless of the method of treatment used, the poorest prognosis follows contusion of the brain complicated by fracture of any part of the skull.

Cardiorrhaphy.—In one of Long's cases of stab wound of the heart, there was a hole in the anterolateral wall of the left auricle. There was no hemopericardium, however, because the opening was plugged by suction into it of the auricular appendix. In the second case there was a wound in the muscle of the left ventricle, which admitted the tip of the finger into the muscle substance but did not penetrate the cavity. Both patients survived the reparative operation and left the hospital in excellent condition.

Florida Medical Association Journal, St. Augustine and Jacksonville

12: 146-176 (Dec.) 1925

Organized Medicine in Florida. J. S. McEwan, Orlando.—p. 146.
Hemorrhage in New-Born. N. L. Spengler, Tampa.—p. 148.
Gas Bacillus Infections. H. D. Van Schaick, Jacksonville.—p. 152.
Need and Advantage of Mental Hygiene Movement. G. H. Benton Miami.—p. 155.
Diseases of Thyroid. E. Jelks, Jacksonville.—p. 161.
Looking Backward Over Fifty Years of Health Work in Florida. J. Y Porter.—p. 164.
Progressive Muscular Atrophy. F. Richards, Jacksonville.—p. 167.

Georgia Medical Association Journal, Atlanta

14: 484-525 (Dec.) 1925

Intracranial Injuries in New-Born. C. H. Richardson, Jr., Macon.—p. 484.
Choice of Anesthesia in Surgical Operations of Rectum. M. C. Pruitt, Atlanta.—p. 490.

Johns Hopkins Hospital Bulletin, Baltimore

37: 369-440 (Dec.) 1925

Surgical Aspects of Sympathetic Nervous System in Work of René Leriche. W. Penfield, New York.—p. 369.
*Postanesthetic Hypoglycemia: Etiology of Recurrent Vomiting. H. Josephs, Baltimore.—p. 376.
*Experimental Study of Amyloid Formation. H. Smetana, Baltimore.—p. 383.
Effect of Parathyroid Extract and Liver Extract on Hypertension Produced by Guanidine Compounds. R. H. Major and C. R. Buikstra, Kansas City, Kan.—p. 392.
*Gonorrheal Endocervicitis Treated with Strong Solutions of Mercurochrome. L. Brady, Baltimore.—p. 400.
Preparation of Hematoporphyrin from Carbon Monoxide Hemoglobin. H. Smetana, Baltimore.—p. 408.
*Bacillus of Paratyphoid Group. H. A. McCordock, Baltimore.—p. 412.
Effect of Carbon Dioxide on Cells in Tissue Cultures. J. T. Bauer, Baltimore.—p. 420.

Postanesthetic Hypoglycemia.—The curve of blood sugar, the excretion of acetone bodies, and the respiratory quotients have been studied by Josephs in a series of children who had undergone short periods of anesthesia. Hypoglycemia of moderate degree was found to occur with great regularity from eighteen to twenty-four hours after the anesthesia. This hypoglycemia was preceded usually, but not invariably, by an increase in the respiratory quotient, and was accompanied by an increased excretion of acetone bodies in the urine. These changes were greater than could be accounted for by starvation. The bearing of these results on the etiology of recurrent vomiting and the allied condition of "postanesthetic acidosis" is discussed.

Amyloid Formation.—Amyloid is interpreted by Smetana as the result of coagulation of the protoplasmic albumin with a swelling of the protoplasm of the cells of the vessel wall; that is, the smooth muscle and especially the connective tissue cells and fibrils, the coagulation being aided by the acid formed by the bacteria. In addition, the protoplasm of red corpuscles and other cells absorbed in the vessel wall and connective tissue, so far as it is capable of swelling, may take part in this "schwellungsnekrose." Theoretically, it is undoubtedly to be assumed that blood and lymph plasma may take part in this coagulation and swelling under the influence of the same nonspecific bacterial endotoxin, but no evidence in this direction could be obtained from animal experiments.

Mercurochrome in Gonorrheal Endocervicitis.—Brady does not feel justified in claiming any superiority of mercurochrome treatment over other methods of treatment of endocervicitis. However, strong solutions of mercurochrome have been effective in cases that have been markedly resistant to other drugs. A real cure resulted in all cases of gonorrheal endocervicitis uncomplicated by salpingitis or bartholinitis. Two distinct advantages of this method are the simplicity of technic and the minimal danger of a resulting salpingitis.

New Bacillus of Paratyphoid Group.—A bacillus of the paratyphoid group, apparently unencountered by previous investigators, is described by McCordock. Culturally it is similar to the other paratyphoids but can be differentiated from them by its low avidity for rhamnose, failing to ferment this sugar in twenty-four hours, and the absence, or only slight production, of gas in all carbohydrates except xylose. Agglutination tests leave no doubt concerning its individuality, and agglutinin absorptions sharply separate it from the other paratyphoid types. The organism is pathogenic for mice, rabbits, guinea-pigs, but especially for rats. For the bacillus here described McCordock proposes the name *Salmonella muriotitis.*

Kansas Medical Society Journal, Topeka

25: 395-426 (Dec.) 1925

Diagnosis of Cardiac Arrhythmias. W. R. Dillingham, Salina.—p. 395.
Sinusitis in Children. L. B. Spake, Kansas City.—p. 397.
Diagnosis of Early Phthisis. L. L. Bresette, Kansas City.—p. 398.
Study of Gaits. G. W. Robinson, Kansas City.—p. 402.
Paretic Gold Curve in Poliomyelitis. K. A. Menninger, Topeka.—p. 411.

Kentucky Medical Journal, Bowling Green

23: 537-580 (Dec.) 1925

Use and Abuse of Atropine in Eyes. W. A. Weldon, Glasgow.—p. 541.
Trichobezar: Case. A. H. Barkley, Lexington.—p. 543.
Social Hygiene for Adolescence Between Ages of Twelve and Sixteen. R. C. Falconer, Lexington.—p. 544.
Neurologic Diseases of Childhood. W. F. Stucky, Jeffersontown.—p. 546.
Endocrinology in Children. J. W. Bruce, Louisville.—p. 548.
Indication for Tonsillectomy. C. T. Wolfe, Louisville.—p. 549.
Diagnosis of Surgical Conditions in Children. R. L. Ireland, Louisville. —p. 551.
Pediatrics. M. Flexner, Louisville.—p. 553.
Metastatic Ophthalmia: Two Cases. A. O. Pfingst, Louisville.—p. 559.
Conjunctivitis: Classification, Causes and Morbid Anatomy. C. Beck, Louisville.—p. 560.
Id.: Symptoms and Prognosis. W. Dean, Louisville.—p. 564.
Id.: Ophthalmia Neonatorum and Vernal Conjunctivitis. J. Heitzer, Louisville.—p. 566.
Id.: Corneal Complications. G. C. Hall, Louisville.—p. 568.
Id.: Treatment. A. L. Bass, Louisville.—p. 570.

Maine Medical Association Journal, Portland

16: 217-232 (Dec.) 1925

Hospital and Community. G. Stone, Bangor.—p. 217.
Urography. C. N. Peters, Portland.—p. 223.

Medicine, Baltimore

4: 345-420 (Nov.) 1925

Anoxemia in Lobar Pneumonia. C. Lundsgaard, Copenhagen, Denmark. —p. 345.
Immunization Against Pneumonia. R. L. Cecil, New York.—p. 395.

Military Surgeon, Washington, D. C.

57: 561-672 (Dec.) 1925

Treatment of War Wounds of Kidney and Bladder in Armies in Field. Maisonnet, Paris.—p. 561.
Means and Policies Which Will Best Enable This Association to Increase Its Membership and Accomplish Its Patriotic Objects as Stated in Its Constitution. E. Blackshear.—p. 566.
Chief Surgeon's Office and General Staff in A. E. F. J. R. Kean. —p. 577.
Fractures of Humerus Treated by Suspension and Traction. H. C. W. S. DeBrun.—p. 599.
Army Veterinary School. W. P. Hill.—p. 604.
Vienna Institute for History of Medicine. A. N. Tasker.—p. 608.
Gorgas Memorial Institute of Tropical and Preventive Medicine. F. H. Martin.—p. 610.
Appreciation of 1925 Field Officers' Course for National Guard and Reserve Officers Given at Carlisle Medical Field Service School. H. W. Cattell.—p. 614.
Status of National Guard. E. Colby.—p. 623.

Northwest Medicine, Seattle

24: 593-646 (Dec.) 1925

Acute Obstruction of Coronary Artery. J. B. Herrick, Chicago.—p. 593.
*Cardiac Infarction. H. A. Christian, Boston.—p. 601.
*Pathology of Coronary Artery Disease. R. L. Benson and W. C. Hunter, Portland, Ore.—p. 606.
Cardiac Factors in Surgical Indications. G. H. Anderson, Spokane, Wash.—p. 610.
Experiences with Local Anesthesia in Goiter Surgery. C. C. Tiffin, Seattle.—p. 614.
Thyroidectomy Under Local Anesthesia. A. S. Jackson, Madison, Wis. —p. 617.
Intrathoracic Goiter: Case. B. T. King, Seattle.—p. 619.
*Glioma of Brain: Cases. G. W. Swift, Seattle.—p. 622.
Carcinomatous Ulcers of Stomach. C. E. Hagyard, Seattle.—p. 625.
Minor Surgery. J. T. Mason, Seattle.—p. 628.
Chronic Suppurative Nephritis. A. H. Peacock, Seattle.—p. 630.
Inguinal Hernia. R. D. Forbes, Seattle.—p. 631.
Uterine Fibroid. R. J. McCurdy, Seattle.—p. 633.

Cardiac Infarction.—Most important in the history of cardiac infarction, Christian says, is the description of the symptoms associated with the occurrence of the infarction. There are two groups of patients: a large group in which pain predominates over all other symptoms, and a small group without pain, having collapse, a sense of impending dissolution, and usually dyspnea, as the chief symptoms. The group with pain is more easily diagnosed because the pain is of a severe, persisting type and at once recognized by the patient as something entirely different from any pain of his past experiences, even though he has had typical attacks of anginal pain. This pain most often is located behind the sternum, especially behind its upper portion. At times it is entirely below the diaphragm. It is almost always a deep seated pain. Frequently it radiates, most often down the left arm, next along the left side of the neck. Gastric symptoms are commonly seen, such as loss of appetite, nausea, vomiting. Dyspnea is a prominent symptom in nearly every patient with cardiac infarction. Of physical signs, perhaps the more constant and important one is evidence of a weak cardiac action with not infrequent arrhythmia. Crackling râles at the base of the lungs are nearly always present and usually persist, except in patients that are recovering, and in these they may be heard for a long time. The abdomen may show distention. The liver often is tender and slightly enlarged. Soon after the infarction occurs, slight fever and slight leukocytosis are almost invariably found. Treatment consists in easing the terrible pain and protecting the heart from the effects of strain. For pain, Christian finds that there is nothing so effective as morphine given promptly and repeatedly until one gets its full effects. Nitroglycerin is of no effect on this pain, and with the lowered blood pressure is contraindicated. Absolute rest in the reclining posture is essential. Christian feels that cardiac infarction is a condition of frequent enough occurrence to be of importance to the practicing physician. In a little less than ten years he has had forty-five cases, and twenty-five cases that recovered from the attack. Among the fatal cases, twenty-eight were proved by necropsy.

Pathology of Coronary Artery Disease.—Two hundred instances of advanced coronary obstruction were selected by Benson and Hunter from a total of 1,750 necropsies. In a total of 145 hearts, emboli or fresh thrombi or old thrombi or combinations of these were demonstrated. In ninety-four hearts, fresh thrombi were present in one or more coronary arteries or their branches. Only forty of the ninety-four contained either definite infarcts or cardiac aneurysms, although a few more contained patchy necroses. Thus, fifty-four had fresh coronary thrombosis without infarction or aneurysm, and it is probable that most of these represent death in the first attack before an anatomic infarct had had time to form. In seventy hearts, the coronary arteries contained either old obliterative or recanalized thrombi, or types of obliterative endarteritis closely simulating these. Aneurysms of the left ventricle occurred in nineteen, and healed infarcts without formation of aneurysm in eleven, cases. Embolism contributed fourteen instances of coronary occlusion, nine of which resulted in infarction. The other five comprise cases which resulted fatally before the anatomic evidences of infarction could manifest themselves. The total number of acute infarcts collected is forty-six; healed infarcts, eleven, and cardiac aneurysms, nineteen; total (after deduction for four duplications), seventy-two infarcts and aneurysms. Definite indisputable aortic syphilis was present in thirty-five, or 17.5 per cent, of the 200. Among the thirty-five hearts accompanied by a definite syphilitic aorta, ten manifested acute coronary thrombosis, five old coronary occlusions, and six contained infarcts; but the number of such cases was not determined. Rupture of the heart, always of the left ventricle, occurred in fourteen cases, exactly one half of which fall in the definitely syphilitic class. One rupture occurred through the septum interventriculorum into the right ventricle; the others, into the pericardial sac. Acute infarcts

caused seven deaths; syphilitic myocarditis, three; rupture of a syphilitic coronary with resulting myocardial apoplexy, and rupture of dissecting coronary aneurysm, one death each.

Glioma of Brain.—Swift reports a case of glioma of the optic thalamus and right frontal lobe. The thalamic syndrome was not present in this case except a crossed plantar irritation. Mental disturbances of the higher centers existed and were due to a tumor in the right frontal lobe, and sensory disturbances were due to the tumor of the right optic thalamus. The absence of ocular findings, especially visual field changes, was significant in this case. Death was due to hemorrhage into the third ventricle. Two other cases of glioma of the optic thalamus are also reported.

Occupational Therapy and Rehabilitation, Baltimore

4: 407-502 (Dec.) 1925

Hospital Records: What May Medical Officer Expect from Occupational Therapist Dealing with Mental Patients? W. J. Tiffany, New York.—p. 417.
Must Prerequisites for Training as Occupational Therapists for Mental and Nervous Work be High? L. J. Haas, New York.—p. 427.
Hand Work in Occupational Therapy for Insane. M. A. Bliss, St. Louis.—p. 435.
Economic Studies of Craft. W. R. Dunton, Jr., Castonville, Md.—p. 441.

Tennessee State Medical Association Journal, Nashville

18: 185-215 (Nov.) 1925

Pellagra. W. T. De Sautelle, Knoxville.—p. 185.
Gun Shot and Stab Wounds of Abdomen; Twenty-Eight Cases; Immediate End-Results. M. B. Davis, Nashville.—p. 190.
Fractures of Elbow. H. Cox, Nashville.—p. 194.
Latent Syphilis and Diagnostic Problems. L. Motley, Dyersburg.—p. 197.
Williamson County Epidemic of Anterior Poliomyelitis. K. S. Howlett, Franklin.—p. 201.

Texas State Journal of Medicine, Fort Worth

21: 459-520 (Dec.) 1925

Teaching and Control of Tuberculous Patient. W. H. Ross, Houston.—p. 472.
Present Status of Tuberculosis Control in United States. A. J. Strawson, New York.—p. 476.
Study of Apparently Healthy Children of School Age Who Are Highly Sensitized to Old Tuberculin. H. Leigh, El Paso.—p. 480.
Stamping out Tuberculosis from Live Stock. W. A. King, San Antonio.—p. 485.
Tuberculous Inflammation of Tracheal and Bronchial Lymph Nodes. H. Hartman, Galveston.—p. 488.
Tuberculous Laryngitis. D. V. Myers, Dallas.—p. 490.
Modern Obstetrics. I. T. Cutter, San Antonio.—p. 494.
Rational Surgery of Cancer; Handicaps and Limitations. A. C. Scott, Temple.—p. 499.
Traumatism of Head and Brain in Civil Practice. G. M. Hackler, Dallas.—p. 501.
Prostatectomy; Forty-Two Cases. F. S. Schoonover, Jr., Fort Worth.—p. 505.
Intestinal Obstruction. H. Smith, Marlin.—p. 507.

West Virginia Medical Journal, Huntington

21: 617-672 (Dec.) 1925

Intracranial Hemorrhage of New-Born. P. F. Barbour, Louisville, Ky.—p. 617.
Hypertension: Treatment. G. H. Barksdale, Charleston.—p. 622.
Value of Prostatectomy Under Spinal Anesthesia. A. G. Rytina, Bluefield.—p. 630.
Treatment of Pulmonary Tuberculosis in Home. G. R. Maxwell, Morgantown.—p. 635.
Cancer of Colon. F. R. Rankin.—p. 637.
Management of Typhoid. J. H. Willson, Hamlet.—p. 644.

Wisconsin Medical Journal, Milwaukee

24: 351-446 (Dec.) 1925

Origin and Progress of Medicine to Beginning of Twentieth Century. W. Cunningham, Platteville.—p. 351.
Health Progress in Wisconsin Cities. S. J. Crumbine, New York.—p. 360.
Health of School Child. A. M. Carr, Madison.—p. 369.

U. S. Naval Medical Bulletin, Washington, D. C.

23: 445-564 (Dec.) 1925

U. S. Public Health Service in War Time. A. M. Stimson.—p. 445.
*Study of Dysentery in Haiti. P. F. Dickens.—p. 452.
Inflammation of Bone. H. W. Gillen.—p. 465.
Red Cell Sedimentation Test. O. R. Nees.—p. 471.
Vienna Clinics. C. W. Lane.—p. 477.
Morale and Medical Care of Dependents. L. H. Williams.—p. 483.
*Coronary Occlusion: Cases. G. F. Clark.—p. 487.
Deep Therapy Treatment of Intrathoracic Lymphosarcoma: Two Cases. J. W. Smith.—p. 491.
Liver Abscess: Five Cases. A. L. Lindall.—p. 494.
Paroxysmal Hemoglobinuria: Case. W. H. Connor.—p. 501.
Osteitis Deformans: Two Cases. H. E. List.—p. 504.

Dysentery in Haiti.—In Haiti, all cases of dysentery are treated successfully by the U. S. Navy surgeons by the intramuscular or subcutaneous administration of a polyvalent serum, plus saline solutions and a nutritious diet in which is included glucose in solution. The majority of cases of dysentery in Haiti are of bacillary origin (Shiga type). Arthritis is the most common complication encountered, and occurred approximately as often in those cases treated with saline solutions alone as in the cases in which serum was given. Neuritis, with muscular atrophy, occurred in a few cases; paralysis of both legs, in one case. It seems that when the destruction of the mucosa reaches a certain extent, no amount of treatment will cure, as the patient is unable to assimilate sufficient food to maintain life.

Coronary Artery Occlusion.—Two of Clark's patients had attacks of pain in the upper thorax, radiating down the arms; temperature elevation for several days after their attacks; leukocytosis with increase of polymorphonuclears, and decided fall in blood pressure within from forty-eight to seventy-two hours of the attack. Electrocardiograms showed inverted or diphasic T waves in two of the three leads.

FOREIGN

An asterisk (*) before a title indicates that the article is abstracted below. Single case reports and trials of new drugs are usually omitted.

Annals of Tropical Medicine and Parasitology, Liverpool

14: 381-466 (Dec. 16) 1925

Microfilariae in Tanganyika Territory. J. F. Corson.—p. 381.
*Spring Relapses in Benign Tertian Malaria. A. Patrick.—p. 387.
*Antirabic Procedure in Palestine: Decentralization of Treatment. G. Stuart and K. S. Krikorian.—p. 391.
*Erythrocytosis in Artificially Inoculated Malaria. G. de M. Rudolf and J. C. Ramsay.—p. 419.
Effect of Ancylostome, Ascaris and Trichuris Infections on Health of West African Native. R. M. Gordon.—p. 429.
New Variety of Anopheles Marshalli from Sierra Leone. A. M. Evans.—p. 461.

Spring Relapses in Tertian Malaria.—Patrick calls attention to two groups of patients. The first group had been transferred to a convalescent camp after recovery from attacks of benign tertian malaria and showed an extraordinary tendency to have relapses in the early spring, although the weather was genial. The second group consisted of patients whom Patrick had treated in the late autumn for severe subtertian malaria, who remained well for two months or longer, and then relapsed about February, but this time with a benign tertian infection.

Phenolized Antirabic Vaccine.—Stuart and Krikorian have found phenolized antirabic vaccine to be an efficient and safe treatment for persons bitten by rabid animals. It can be distributed to any number of treatment centers, where as good results attend its use as at the place of its production. Better results have followed the employment of a dosage of 5 cc. daily of a 1 per cent emulsion, over fourteen days, than of 2 cc. of the same emulsion over the same period. Bitten persons can be treated at or near their own homes and thus—the all important consideration of immediate treatment aside—they are spared the expenses connected with travel to and residence in a strange town.

Erythrocytosis in Artificially Inoculated Malaria.—In four cases of general paralysis inoculated with benign tertian malaria, Rudolf and Ramsay found an erythrocytosis to precede the anemia. The erythrocytosis occurred whether the inoculation was performed by means of mosquitoes or by subcutaneous injection of malarial blood. It was independent of the sex of the patient and of a history of previous malaria. The succeeding anemia occurred or persisted for several days after the cessation of the fever. Regeneration of the red cells was complete within three weeks, although the degree of anemia was very different in the four cases. An erythrocy-

tosis was found to follow the anemia. The hemoglobin in two cases varied with the number of red cells, but regeneration was less rapid. The color index was, as a rule, of the secondary anemia type. At certain periods it became as low as 0.5. In two cases the number of parasites was found to vary approximately with the degree of fever, although the number of parasites was very different.

British Journal of Radiology, London

30: 451-500 (Dec.) 1925

Roentgen-Ray Studies on Physiology and Pathology of Tracheobronchial Tree. S. A. Reinberg.—p. 451.
Pleural Rings. S. Melville.—p. 456.
Peribronchial Phthisis. A. C. Jordan.—p. 460.
Effect of Roentgen Rays on Blood Vessels and Capillaries. O. David.—p. 462.
Temporary Relaxation of Diaphragm. W. Altschul.—p. 465.
Aneurysm of Internal Carotid Artery and Tumors at Base of Brain. M. C. Sosman.—p. 468.
Technic of Intraperitoneal Irradiation of Cancer of Cervix Uteri. F. Daels and P. de Backer.—p. 472.
Experimental Provocation of Tumors by Means of Radium. F. Daels.—p. 474.
Eighty-Five Inoperable Cases of Carcinoma of Cervix, Treated with Radium. M. Donaldson.—p. 477.
Efficient and Economical Roentgen-Ray Filtration. A. W. Erskine.—p. 479.
Roentgenology in Veterinary Practice. J. Debicki.—p. 482.
Roentgen rays and Problem of Races. J. Debicki.—p. 486.

Bristol Medico-Chirurgical Journal

42: 201-248 (Winter) 1925

Continuity and Change. T. Carwardine.—p. 201.
Some Problems in Pulmonary Disease: Radiography. H. H. Carleton.—p. 211.
Practical Importance of Posture in Physical Examination of Heart; Stethoscopes. W. Gordon.—p. 224.

Ceylon Journal of Science, Colombo

1: 107-154 (Nov. 18) 1925

*Treatment of Leprosy. L. F. Hirst.—p. 107.
Value of Hookworm Control of Ceylon Estates. J. F. Docherty.—p. 111.
*Treatment of Hookworm and Ascaris Infections with Carbon Tetrachloride and Oil of Chenopodium. W. C. Sweet.—p. 121.
Hookworm Reinfection: Analysis of 8,239 Ceylon Egg Counts. W. C. Sweet.—p. 129.
Case of Mass Infestation with Cysticercus Cellulosae. L. Nicholls.—p. 141.
Effects of Nematode Larvae in Eye. H. P. Joseph.—p. 143.
Nematode Larva Removed from Eye. L. Nicholls.—p. 145.
Verminous Ophthalmia of Horse in Ceylon. L. Nicholls and M. Crawford.—p. 147.
*Incidence of Pulmonary Tuberculosis in Colombo as Indicated by Examination of Sputum Found in Public Places. R. De Silva.—p. 151.
Vibrios in Human Excrement. K. Vallipuram and W. R. de Silva.—p. 153.

Treatment of Leprosy.—Hirst suggests an explanation for the activity of the chaulmoogra oils in leprosy which he believes may point the way to the possibility of improved results. He says: "May it not be that the active principle of the hydnocarpus oils is a product of high energy chemistry, the energy being derived from intense solar radiation of the tropical forests where these trees are grown; and that the therapeutically inactive oils have lost their increment of energy?"

Treatment of Hookworm Infestation.—The most efficient treatment tested by Sweet for removing hookworms was a combination of carbon tetrachloride and oil of chenopodium, in a ratio of 3:1, given in a solution of magnesium sulphate for a purge. This combination was also highly efficient in removing ascarids, although the giving of the salts two hours after the anthelmintic increased the efficiency in removing these worms. In a country where infection with *Ascaris lumbricoides* is widespread, the combination treatment, given in the purge of magnesium sulphate, will be a better routine measure than either of the anthelmintics given alone.

Pulmonary Tuberculosis in Colombo.—One hundred and eighty-four specimens of sputum collected from the floors of railway carriages and buildings, platforms, refreshment rooms and streets were examined by De Silva for tubercle bacilli. Seven of these sputums showed the presence of acid-fast organisms morphologically indistinguishable from *B. tuberculosis*.

Indian Journal of Medical Research, Calcutta

13: 205-440 (Oct.) 1925

Pharmacologic Action and Therapeutic Properties of Adhatoda Vasica (Basak). R. N. Chopra and S. Ghosh.—p. 205.
Helminthic Parasites of Cats in Calcutta and Relation of Cats to Human Helminthic Infections. A. C. Chandler.—p. 213.
Bacteriologic and Laboratory Technic. XII. The Microscope. W. F. Harvey.—p. 229.
Intra-Arterial Anesthesia in Dogs. J. P. Arland.—p. 263.
Relative Number of Male and Female Crescents in Malignant Tertian Malaria. R. B. Lal.—p. 265.
*Blood Sugar in Bengalese; I. U. N. Brahmachari and P. Bikash.—p. 271.
Comparative Studies of Antennae of Some of Higher Diptera. W. S. Patton and E. MacGill.—p. 275.
Calcium Cyanide Fumigation. S. N. Gore.—p. 287.
Life History of Hookworm in Nature. V. T. Korke.—p. 301.
*Effects of Quinine on Blood Sugar. T. A. Hughes.—p. 321.
Mechanism of Quinine Hemoglobinuria in Man. I. U. N. Brahmachari and P. B. Sen.—p. 337.
Two Malarial Surveys Connected with Industrial Projects in Certain Very Highly Malarious Localities in India. I. At Assam. S. R. Christophers.—p. 343.
Id. II. Malaria, Blackwater Fever and Ancylostomiasis in Singhbhum. S. R. Christophers.—p. 363.
Epidemiology of Hookworm and Other Helminth Infections on Assam Tea Estates. A. C. Chandler.—p. 407.
Epidemiology of Cholera. A. J. H. Russell.—p. 427.

Blood Sugar in Bengalese.—Defective sugar tolerance was noted by Brahmachari and Sen among many medical students in Bengal living on a dietary containing a large amount of carbohydrates. It is held that these students are potentially diabetic.

Effects of Quinine on Blood Sugar.—The fact that quinine administered to rabbits in large doses produces a rise in blood sugar has been confirmed by Hughes. The evidence adduced seems to show that quinine influences the level of the circulating glucose in two ways, one by stimulating the sympathetic system and so probably causing a secretion of epinephrine, leading to hyperglycemia, and the other by causing a liberation of insulin with resultant hypoglycemia. The experiments recorded here give no clue as to the method by which quinine may affect the output of insulin.

Journal of Tropical Medicine and Hygiene, London

28: 437-452 (Dec. 15) 1925

Pathology of Clonorchis Infection of Pancreas. H. B. Newham.—p. 437.
Modification Produced by Radium on Emulsion of Adenocarcinoma of Mouse and Transformation Into Curative Vaccine. G. Tizzoni, E. Cetanni and G. de Angelis.—p. 438.
Removable Causes of Unemployment and Crime. F. G. Cawston.—p. 441.

Lancet, London

2: 1265-1316 (Dec. 19) 1925

*Efficiency of Heart: Measurement. Y. Henderson.—p. 1265.
*Ischemic Necrosis of Heart Muscle. A. G. Gibson.—p. 1270.
Lupus of Nose and Upper Air Passages Treated by Radium. H. M. Wharry and O. Teichman.—p. 1275.
*Blood Crisis. A. E. Somerford.—p. 1280.
Estimation of Small Quantities of Bismuth in Urine. C. A. Hill.—p. 1281.
Cystoscope Designed for Application of Diathermy to Bladder Tumors. F. Kidd.—p. 1282.
Diagnosis of Early Nervous Disease. M. A. Blandy.—p. 1314.

Efficiency of Heart.—Henderson closes his lecture with this statement: The only adequate expression of the efficiency of the heart is one based on accurate measurement of the volume of blood that the heart pumps and on the amount of oxygen consumed by the body. The relation between these two functions determines the arteriovenous oxygen difference, and thus determines the amount, and particularly the pressure of the oxygen supply to the working tissues of the body. In vigorous mammals of all sizes the arteriovenous oxygen difference during bodily rest is about 3 or 4 per cent by volume. The volume of the circulation in vigorous men and animals at rest is about 3 or 4 liters of blood each minute per square meter of skin surface. The stroke volume for animals and men of corresponding activity is a function of their body weights, not their surfaces. For all vigorous mammals, including man, the stroke index during rest is about 1.4 to 1.8 cc. for each kilogram per beat. The pulse rate is in general proportional to surface weight ratio and is thus in general an index of the intensity of respiratory metabolism. The mechanical conditions of the heart's activity and

its own behavior make the right ventricle the meter of the circulation. The size of the stroke of this meter depends on the volume and pressure of the venous return. The vena-pressor mechanism is adjusted to act in relation to the intensity of the gaseous exchange of the tissues.

Ischemic Necrosis of Heart Muscle.—Forty-three cases of various clinical types of ischemic necrosis, taken from various sources, are analyzed by Gibson. Sudden death occurred in seven of these cases; angina was the dominant symptom in sixteen cases. In six cases, the symptoms were those of chronic heart failure. Abdominal symptoms and collapse were present in eight cases; four cases did not present any cardiac symptoms. One patient had fainting attacks and died suddenly, and in one case delirium and failing pulse were present for three days before death. In all these cases, blockage of an artery and consequent change in the heart wall was found at the necropsy.

Blood Crisis in Pernicious Anemia.—In the case cited by Somerford, the erythrocytes numbered about 1,500,000; the leukocytes varied between 3,600 and 6,800; the color index varied from 0.7 to 1.0. But there were also present normoblasts, 57 per cubic millimeter, and megaloblasts, 43 per cubic millimeter. The erythrocytes showed a marked degree of anisocytosis, poikilocytosis and macrocytosis. Punctate basophils and polychromatophils were not found, and blood platelets were apparently absent. In addition to normoblasts and megaloblasts, a more primitive cell, the erythroblast, was observed, a large cell with an intense basophil protoplasm and an oval or round structureless nucleus staining purple with Leishman's stain. Included in the counts among the megaloblasts were the metrocytes, which cells possess a megaloblastic nucleus with only a narrow fringe of polychromatophilic protoplasm. Cells with oak leaf nuclei were numerous. In some erythrocytes there were small round bodies which took up the nuclear stain and sometimes formed a complete ring surrounding the nucleus. These are known as Howell-Jolly bodies. The megaloblasts ran as high as 240 per cubic millimeter, and the normoblasts, 264.

Medical Journal of Australia, Sydney

2: 669-690 (Dec. 12) 1925

Gleanings from Midwifery Practice. A. A. Lendon.—p. 669.
Modern Developments in Obstetrics. R. F. Matters.—p. 672.
*Roentgenographic Examination of Base of Skull and Upper Cervical Vertebrae: Gargoyle Position. H. Flecker.—p. 678.
*Poliomyelo-Encephalitis Treated Successfully by Human Serum. R. Hylton.—p. 679.

Gargoyle Postion for Skull Roentgenoscopy.—Attention is drawn by Flecker to a special method of taking roentgenograms of the base of the skull and upper cervical vertebrae. The position in which these are made is referred to as the "gargoyle" position. The patient lies prone, with the arms fixed by grasping some objects at the sides. The upper part of the chest and front of the neck lie as close as possible to the plate. The chin is stretched upward as far as possible, thus placing it forward clear of the basi-occipital and basi-sphenoid regions, so that even the posterior edge of the vomer may be exposed behind the shadow of the symphysis menti. Incidentally, the mandibular rami are drawn well forward clear of the greater wings of the sphenoid.

Injection of Human Serum in Poliomyelo-Encephalitis.—Twenty-four hours after the injection of 15 cc. of serum from a patient convalescent from infantile paralysis into the spinal theca, and 5 cc. of human serum (group I) into the median basilic vein, Hylton's patient showed marked improvement. On the third day, 15 cc. of group III and 10 cc. of group II serum from a convalescent patient were injected intrathecally. On the fourteenth day, the boy was apparently quite normal in every way.

Medical Journal of South Africa, Johannesburg

21: 91-124 (Nov.) 1925

Lesions About Diaphragm. H. L. Heimann.—p. 93.
Diagnosis and Treatment of High Arterial Blood Pressure. O. K. Williamson.—p. 97.
Liver Abscess Cured by Emetine Injections. A. C. Abelheim.—p. 102.
Treatment of Asthma. N. Wall-Mesham.—p. 104.

Annales des Maladies Vénériennes, Paris

20: 801-896 (Nov.) 1925

*Complications of Arsphenamine Treatment. C. Laurent.—p. 801.
Value of Wassermann and Meinicke Tests. M. Kitchevatz.—p. 810.
Gonorrhea from Lesion in Woman's Axilla. J. Montpellier.—p. 815.
The Congenital Syphilis Conference. Paris, Oct. 5, 1925.—p. 819.

Six Years' Experience of Arsphenamine Treatment.—Laurent reports the by-effects from arsphenamine and neo-arsphenamine in 27,000 intravenous injections (2,800 patients). Most of the numerous immediate complications were of benign character, without consequences. Three cases of erythrodermia, one of grave jaundice with polyneuritis; one of toxic polyneuritis in a tabetic, and one case of tardy convulsions with urticaria, all ended in recovery. Death occurred after one injection in one case; after the fifth injection in another. No satisfactory explanation of the fatal issue can be given.

Annales de Médecine, Paris

18: 247-326 (Oct.) 1925

*Digestion Hemoclasis Test. F. Widal and P. Abrami.—p. 247.
The Heredity Question in Tuberculosis. R. Debré and Lelong.—p. 256.
*Heart Lesions in Diphtheria. R. Lutembacher.—p. 278.
Diphtheria Bacilli Carriers. C. Zoeller and Manoussakis.—p. 294.
Rickets and Lack of Sunlight. F. Figueira.—p. 303.
Mediastinal Pleurisy. J. Morin.—p. 307.

The Digestion Hemoclasis Test and Vagotonia.—Widal and Abrami assert that a negative digestion hemoclasis test with hepatic insufficiency must be due to faulty technic. The changes in the leukocyte count may be overlooked if the count is not made every twenty minutes after the ingestion of the milk (200 Gm.). In 46 per cent of their 432 cases with a positive response, the hemoclastic crisis had run its complete course in less than an hour. This readily explains, they say, why the test was negative in 44 per cent of Piersol and Bockus' cases of liver insufficiency ("Liver Function Test," THE JOURNAL, Oct. 4, 1924, p. 1046). Piersol and Bockus made the leukocyte count one and two hours after the milk had been ingested. The hemoclastic crisis is usually past by that time. The test may also be negative with liver disease in which the greater part of the parenchyma is still intact; otherwise, Widal declares, it is always positive. Of twenty patients with a positive response to the test and unmistakable liver disease, in only three was there evidence of vagotonia. In twenty other patients supposedly free from liver disease, only one presented a positive digestion hemoclasis reaction, and this was in a hysteric subject with extreme vagotonia. Thus there does not seem to be any connection between vagotonia and derangement of the proteopexic function of the liver, which Widal and Abrami claim is one of the earliest signs of hepatic insufficiency, and which is revealed by the hemoclastic crisis.

Heart Disturbances in Experimental Diphtheria.—Lutembacher injected rabbits intravenously with diphtheria toxin. Microscopic examination showed changes of the myocardium in all. The lesions were similar to those from digitalis or quinidine poisoning. They were present even when there were no manifestations of paralysis. The heart lesions and arrhythmia in diphtheria seem to be due to a direct action of the toxin on the heart and its automatic centers.

Bulletin de l'Académie de Médecine, Paris

94: 1175-1254 (Dec. 15) 1925

Vaccination in France and Algeria in 1924. L. Camus.—p. 1189.
Leprosy in France. Jeanselme.—p. 1236. See Paris Letter, Jan. 2.
Aliens in Paris Hospitals. P. Remlinger.—p. 1240.
Idiopathic Fevers. P. Remlinger.—p. 1243.
Study of a Recent Measles Epidemic. R. Martial.—p. 1249.
Reducing Agents in the Organism. J. Roux.—p. 1251.

94: 1255-1282 (Dec. 22) 1925

Causes of Recrudescence of Alcoholism. Cazeneuve.—p. 1259.
Treatment of Keratoconus. Lagrange.—p. 1265.
Sporadic Scurvy. G. Delamare and S. Djémil.—p. 1274.
Stain Injected in Walls of Stomach or Intestine Reaches Lungs and Thoracic Glands. L. Binet and J. Loubry.—p. 1276.
*Stenosis of Esophagus in the Elderly. J. Guisez.—p. 1279.

Stenosis of the Esophagus in the Elderly.—Guisez calls attention to an inflammatory stenosis of the esophagus, occurring chiefly in men over 50 years old. The difficulty in swallowing is intermittent at first; after a few years it becomes permanent, and gradually even liquids do not pass

through the esophagus. The disease at this stage may be mistaken for cancer. Incompletely chewed food seems to induce spasm of the esophagus, followed by stagnation of the food and inflammation of the organ. This entails hypertrophy or sclerotic degeneration of the mucosa, with consecutive stenosis. The disease may become complicated by cancer. Roentgen ray and esophagoscopy indicate the location of the stenosis. The treatment consists in repeated insertion of a filiform bougie, left for a few hours, continuing with bougies of a progressively larger size.

Comptes Rendus de la Société de Biologie, Paris

93: 1265-1336 (Nov. 27) 1925. Partial Index

*The Fetid Bacilli of Ozena. G. Blanc and G. Pangalos.—p. 1267; p. 1268.
Basal Anoturia. C. Richet, Jr., and Minet.—p. 1270.
Sarcoma from Injection of Indol. A. Carrel.—p. 1278.
Autophagy in Inflammation. K. Toumanoff.—p. 1281.
Culture Medium for the Bacteriophage. E. Pozerski.—p. 1285.
*Symbiosis of Bacteria and the Bacteriophage. F. d'Herelle and Hauduroy.—p. 1288.
*Anaphylaxis from Proteins. F. Arloing and Langeron.—p. 1305.
Absorption of Hemolytic Amboceptor. I. Moldovan and T. Slavosca.—p. 1317.
Influence of Sugar on Lactation. I. I. Nitzescu.—p. 1319.
Mechanism of Action of Eserine. G. Popoviciu.—p. 1323.
*The Inactivated Bacteriophage as an Antigen. I. N. Asheshov.—p. 1327.
*Action of Insulin on Beriberi. X. Chahovitch.—p. 1333.

Bacilli Causing Fetidity in Ozena.—Blanc and Pangalos' experiments on rabbits showed that *Bacillus ozaenae* and *B. ozogenes* are only slightly virulent, have no particular affinity for the nasal fossae, and do not cause the characteristic lesions of the disease. Cultures of these bacilli were applied to the sound nasal mucosa of five persons and one with atrophy of one turbinate. In this latter subject these bacilli persisted in the nose for over three months; in the others they disappeared early. Evidently infection with bacilli responsible for the offensiveness of the discharge is a secondary phenomenon, occurring preferably in those with an atrophic form of the nasal disease.

Symbiosis of Bacteria with the Bacteriophage.—Bacterial emulsions treated with the bacteriophage were passed through filters impermeable for ordinary bacteria. In a few days or weeks the filtrates showed bacterial growth again, thus presenting secondary cultures of a filtrable form of bacilli resistant to the bacteriophage. With only slightly virulent bacteriophage the secondary cultures appeared rapidly, and the bacilli were almost unchanged. With a strongly virulent bacteriophage the cultures were scanty and tardy. No bacilli or cocci could be found in these cultures, only fine granules which gradually increased in number and size. When the secondary cultures are transplanted into a broth medium, the granules either resume the shape of normal bacilli or they may persist unmodified indefinitely. In this latter case they represent a perfect symbiosis of the bacterium with the bacteriophage. The symbiosis may be definitive or it may be interrupted by isolation on a solid medium. The phenomenon of symbiosis is also observed in secondary cultures from nonfiltered bacterial emulsions, if the bacteriophage is only slightly virulent. The vitality of the association: bacterium and bacteriophage is considerable. Shiga's bacillus, for instance, alone does not survive for more than a few weeks in broth, while in symbiosis with the bacteriophage it may be kept alive for ten years. This fact, d'Herelle and Hauduroy say, may explain the reviviscence, the renewal of vital activity, of certain infectious diseases, the origin of which is still a mystery.

Anaphylaxis Inducing Property of Proteins in Connection with Digestion Phases.—Arloing and Langeron's research on 113 guinea-pigs showed that the sensitization property of proteins does not parallel the property of inducing shock. The sensitization property of a protein is manifest rather in the beginning of digestion, while shock is induced more in the later phase of digestion.

Antigen Property of Inactivated Bacteriophage.—Asheshov injected rabbits with a bacteriophage rendered inactive by heating or drying and aging. The serums from these animals appeared to possess a specific antibody property against the bacteriophage.

Action of Insulin on Experimental Beriberi.—Chahovitch found that under insulin treatment the development of experimental beriberi in pigeons was retarded. The drop in temperature and loss of weight occurred also more slowly than in the controls.

Journal d'Urologie, Paris

20: 273-352 (Oct.) 1925

Prostatic Obstruction and Prostatectomy. L. A. Surraco.—p. 273.
*Renal Tuberculosis in Children. E. Falci.—p. 301.
Calculus of the Ureter. V. Hourtoule.—p. 318.
Suppurating Pericystitis. J. Malartre.—p. 320.

Renal Tuberculosis in Children.—Falci gives comparative statistics on renal tuberculosis in children and adults. The disease is rare in young children; the proportion gradually increases with age, becoming most frequent between 12 and 18, and again between 19 and 30. Both kidneys are involved in young children twice as often as in adults, and the course of the bilateral disease is rapidly fatal in children. Operations in cases with one tuberculous kidney were followed by death in 44 per cent and aggravation of the condition in 16 per cent. No changes were noted in 16 per cent; while 24 per cent of the children recovered. The course of the bilateral disease is less rapid in adults than in children. After removal of the tuberculous kidney in adult unilateral cases, 56 per cent of the patients recovered, while only 24 per cent recovered in analogous cases in children.

Paris Médical

57: 533-548 (Dec. 26) 1925

Biology and Pathology of the Child. G. Mouriquand.—p. 533.
*Colitis and Nervous Disturbances. R. Savignac and R. Sarles.—p. 540.
Masked Syphilis in Obstetric Practice. Le Lorier and Galliot.—p. 542.
Intestinal Amebiasis. M. Leger.—p. 544.

Colitis and Nervous Disorder.—Savignac and Sarles call attention to the association of colitis with nervous disturbances of the type of morbid emotional reactions and anxiety neurosis. In colitis with pronounced fermentation and exaggerated production of volatile fatty acids or organic acids, disturbances indicating nervous irritability were found in over 71 per cent of 172 patients. In colitis with pronounced putrefaction, in which the amount of acids is almost normal, the coincidence of nervous phenomena was noted only in 20 per cent. Increase of the acids may disturb the acid-base balance, and subsequently act on the sympathetic system, inducing this *angoisse* syndrome.

Presse Médicale, Paris

33: 1697-1712 (Dec. 26) 1925

*The Heart After Cervical Sympathectomy. T. Jonnesco and D. Ionesco.—p. 1697.
Organ Disturbances in Skin Diseases. L. Lortat-Jacob.—p. 1699.
Arterial Circulation in Bundle of His, et. E. Géraudel.—p. 1702.
*Tests in Tuberculosis. F. L. von Muralt and P. Weiller.—p. 1705.
Tube Treatment of High Intestinal iFstulas. J. Sénèque.—p. 1705.

Condition of the Heart After Sympathectomy.—Jonnesco and Ionesco's research was made weeks or years after partial or total resection of the cervical sympathetic in treatment of angina pectoris or other disease. The pulse and blood pressure appeared normal in the subjects. The force of the heart contraction was not modified. Roentgenoscopy showed that the operation had not affected the shape or size of the heart. There were no changes in the electrocardiogram and in auriculoventricular transmission of the impulse wave. An injection of epinephrine accelerated the pulse and increased the blood pressure even in those with old bilateral sympathectomy. Evidently the accelerator nerves are not of vital importance. Among seventy-four operations of the kind, resection of the cervical and thoracic sympathetic was done in thirty-two; a partial resection of the cervical sympathetic, including the superior cervical ganglion, in twenty-four; resection of Cyon's nerve in eighteen. The mortality was about the same after each type of operation, namely, 20 per cent. Jonnesco and Ionesco conclude that resection of the cervical and thoracic sympathetic, including the stellate ganglion, is the only effectual treatment of angina pectoris, since it suppresses all the sensory nerves involved.

The Diazo Reaction and Sedimentation Speed in Tuberculosis.—Muralt and Weiller report, among others, seven cases

of pulmonary tuberculosis in which the diazo and sedimentation tests were applied to the blood. The diazo reaction was found invariably positive only in extremely grave cases; in others it may be negative. This reaction does not parallel the development of the disease. The speed of sedimentation of erythrocytes is rapid in grave pulmonary tuberculosis; it varies progressively in different forms of the disease, corresponding to its course. Hence the sedimentation test is more valuable in prognosis of tuberculosis than the diazo reaction.

Revue Française de Pédiatrie, Paris

1: 409-528 (Oct.) 1925

Perspiration in Infants. J. Meyer.—p. 409.
Smith's Sign and Venous Murmur. Brokman and Prokopowicz.—p. 439.
*Ultraviolet Rays in Tuberculosis. P. Gautier and R. Peyrot.—p. 447.
Tuberculosis in Young Children. L. Ribadeau-Dumas.—p. 453.
Bacteriology and Serology. A. Dufourt.—p. 478.
Syphilis in Children. M. Péhu.—p. 496.
Respiratory Diseases in Children in 1924. P. Armand-Delille et al.—p. 519.

Ultraviolet Rays in Treatment of Tuberculosis in Infants.—Gautier and Peyrot report the details of three cases, out of a total of fifteen, in which tuberculous infants were treated by systematic exposures to ultraviolet rays. These infants were all under 18 months, with a positive skin reaction. The whole body of the child was exposed daily to the rays, starting with a one minute exposure and gradually increasing to thirty or forty-five minutes. This actinotherapy was continued for months, without any unfavorable reactions. A pronounced improvement of the appetite, fever and weight was manifest in all, thus reenforcing the organism in its fight against the tuberculosis infection.

Revue Neurologique, Paris

32: 513-704 (Nov.) 1925

Histology and Pathogenesis of Charcot's Disease. Marinesco.—p. 513.
*Roentgen Rays and Radium in Treatment of Brain Tumors. G. Lévy.—p. 550.
Study of Apraxia; Two Cases. J. Lhermitte et al.—p. 586.
*Periarterial Sympathectomy in Epilepsy. J. Tinel.—p. 613.

Roentgenotherapy of Brain Tumors.—Lévy reiterates that the roentgen rays are contraindicated in cases of syphilitic gumma or tuberculoma of the brain. A superficial and circumscribed tumor, as well as those containing calcium or bone tissue, and cystic tumors are amenable to operative measures. The rays may be tried for glioma and for intraventricular and all diffuse and deeply situated tumors, especially in those of the pituitary gland. Small doses of rays are given as long as there are no signs of intracranial pressure. When choked disk appears, the exposures must be interrupted, and be resumed only after disappearance of the pressure on the brain, under lumbar puncture or decompressive trephining. In cases with old choked disk, the trephining should precede the roentgenotherapy. In cases with an uncertain localization of the tumor, successive fields of the whole skull should be exposed to the roentgen rays. This therapy is indicated in a tumor recurring after roentgen rays or operation. He summarizes a number of clinically successful cases from the literature, and adds that this treatment is harmless.

Periarteral Sympathectomy in Epilepsy.—Tinel reports that the woman of 38, subject to epileptic seizures since the age of 20, has had no return of true seizures during the six months since the decortication of both internal carotids by the usual sympathectomy technic. For the preceding three years there had been about three or four major seizures a day, with twelve or fifteen minor attacks.

Union Médicale du Canada, Montreal

54: 681-746 (Nov.) 1925

Interlobar Pleurisy. T. Bruneau.—p. 681.
*Fate of Ovarian Graft. P. Z. Rheaume.—p. 686.
The Practitioner and Disease of the Urinary Apparatus. B. G. Bourgeois.—p. 691.
Visceral Origin of Asthma. A. Le Sage.—p. 698.
Spontaneous Rupture of the Heart: Two Cases. Derome and Fontaine.—p. 707.
General Principles for Treatment of Pneumonia. A. Le Sage.—p. 710.
Idem of Asthma. A. Le Sage.—p. 711.
Uremia. (Lecture in Regular Course.) Lemierre.—p. 713.
Treatment of Eczema. A. Marin.—p. 722.

Remote Results of Ovarian Transplantation.—Rheaume had the opportunity to examine an ovary that had been transplanted into the abdomen after bilateral ovariectomy five years before. After the operation the woman suffered exceptionally severely from the phenomena of the induced menopause. At the recent laparotomy (required for a different disease), the ovary appeared reduced to one half its former size. It was enclosed in a fibrous capsule, but was abundantly supplied with vessels and was well nourished and anatomically almost intact. The physiologic function of the gland, however, had evidently never been resumed. Rheaume thinks that ovarian grafting is worth even less than grafting monkey testicles in men.

Archivio Italiano di Chirurgia, Bologna

14: 337-480 (Oct.) 1925

Lumbar Hernia. F. Virgillo.—p. 337.
Diverticulum in Lower Rectum. G. Fantozzi.—p. 418.
*Periarterial Sympathectomy. G. Pieri.—p. 433.
Structure of a Long Isolated Stomach Flap. Ciminata.—p. 474.

Periarterial Sympathectomy.—In Pieri's twenty-three cases, in all but one the femoral artery was the one decorticated. Ten of the patients (aged above 56) complained of intense pains in the thigh, and in all these cases the pains were abolished by the periarterial sympathectomy, but the nutrition of the tissues and the local circulation were not improved, and ischemic necrosis developed in three cases. Necropsy in one bilateral case showed that the caliber of the dorsalis pedis was less on the decorticated side than on the other. Other successful cases were one of perforating ulcer of the foot; one of simple ulcer, and one of neuropathic gangrene of the right leg in a man, aged 75. The pains disappeared at once. Three cases of tuberculous bone and joint lesions terminated in recovery, but the general sanatorium treatment was probably responsible for the healing. In a fourth case, conditions were aggravated by the sympathectomy.

Policlinico, Rome

32: 1705-1743 (Dec. 7) 1925

*Sodium Chloride and the Bacteriophage. A. Alessandrini.—p. 1705.
*Malaria Treatment of General Paresis. T. Cortesi.—p. 1708.
Case of Congenital Sarcoma. S. Castellana.—p. 1709.

Action of Sodium Chloride on the Bacteriophage.—Alessandrini found that all traces of bacteriophage action were lost in his cultures from a typhoid patient when the dilution of the culture was with physiologic sodium chloride solution and the tube was kept at a constant temperature of 37 C. for ten days. Distilled water and hydrant water had no such action on the bacteriophage, and the destructive action of the sodium chloride solution could be averted by addition of a little calcium carbonate. These facts sustain, he says, the assumption that the bacteriophage is a living organism, as sodium chloride penetrating the living cell forms within the cell a toxic product in combination with the acid it finds there, and the cell dies. But this occurs only with a living cell. The bacteriophage behaves in this respect like a living cell.

Malaria Treatment of General Paresis.—Cortesi saw no benefit from the malaria treatment in five far advanced cases, but in nine others the mental symptoms were materially improved. The physical symptoms, however, did not show much if any benefit. The great improvement was in the mental condition, amounting almost to a cure in one case. The intervals since have been only three to six months.

Riforma Medica, Naples

41: 1181-1204 (Dec. 14) 1925

Practical Tendency in Medicine. A. Ferrannini.—p. 1181.
*Lambliasis and Cholecystitis. C. Pappalardo.—p. 1183.
Presymptomatic Stage of General Paresis. G. Pellacani.—p. 1186.
Wassermann Reaction with Blood Clot. A. Pfanner.—p. 1190.
*Fourth Italian Urology Congress.—p. 1195.

41: 1205-1228 (Dec. 21) 1925

Underdevelopment. A. Galluppi.—p. 1205.
The Meltzer-Lyon Test. P. Marcovich and L. Monti.—p. 1210.
Exophthalmic Goiter. P. Castellino.—p. 1214.
Dermoid Cyst of the Mesentery. G. Piermarini.—p. 1224.
Unusual Form of Sarcomatosis. C. Lotti.—p. 1226.

Lambliasis and Cholecystitis.—Pappalardo aspirated gallbladder bile by the duodenal tube in thirty patients. No

lamblia parasites were found in two of them who had cholecystitis, and in twenty-five with other diseases of the gastro-intestinal tract. In three of his five cholecystitis patients the lamblia was present in biles A and B.

Fourth Italian Urology Congress.—The chief topic for discussion at this congress was pyelonephritis.

Brazil-Medico, Rio de Janeiro

2: 259-276 (Nov. 7) 1925

*Hospitals of the State of S. Paulo. F. Terra.—p. 259. C'cn. p. 283.
*The Blood Count in Changes of Balance in the Vegetative Nervous System. A. L. Pimenta Bueno.—p. 266.

The Hospitals in the State of S. Paulo.—This is an official report. There are about 2,000 lepers in the state, and the model Sto. Angelo colony now under way is planned to surpass all other institutions of the kind in the world. The radium institute has 557 mg. of radium, bought in the United States.

The Lymphocytes in Leukocytosis.—Pimenta Bueno explains the fluctuations in the differential leukocyte count as the result of changes in the balance between the sympathetic and the parasympathetic. The polymorphonuclears react first to the vasomotor disturbance. When the disturbance is severe, the lymphocytes react too. In the latter case the peripheral blood loses both polymorphonuclears and lymphocytes, which migrate toward the central region, leaving only the mononuclears.

Gaceta Médica de Caracas

32: 305-320 (Oct. 31) 1925

Present Status of Caronia's Vaccine Against Measles and Milne's Method of Treating Measles. Villegas Ruiz.—p. 305.
*The Risquez Sign in Malaria. Villegas Ruiz.—p. 307.
Cancers of the Face and Epibulbar Epitheliomas. L. López Villoria. —p. 308. C'cn.
The Mineral Springs of Venezuela. G. Delgado Palacios.—p. 310. C'td.

The Risquez Sign in Malaria.—Villegas Ruiz recalls that Risquez at the first Pan-American Congress, in 1893, called attention to the diagnostic importance of blood pigment loose in the blood in malaria. The melanic pigment can be easily detected in a drop of blood between the slide and the cover glass. A few drops of sulphuric acid, taken up by capillary attraction, will render it more evident by destroying the blood corpuscles and the hemoglobin without affecting the pigment. He had found this sign positive in different forms of malaria and even after quinine treatment and disappearance of the hematozoa from the blood. Arriola of Panama reported in 1911 that the urine in malaria contains a melanic pigment which may aid in the differential diagnosis. At a recent meeting of the Paris Tropical Medicine Society, Gaston and Perrot urged application of the Risquez test in parallel series in malarial districts to establish its differential value.

Prensa Médica Argentina, Buenos Aires

12: 621-656 (Nov. 20) 1925

Radiography of the Heart. M. R. Castex and J. J. Beretervide.—p. 621.
The Pigmentation in Endemic Arsenic Poisoning. M. Zinny and J. C. Vivaldo.—p. 625.
*Gelatin in Treatment of Pains. M. Margulis.—p. 637.
Cultivation of the Entameba. D. Greenway.—p. 641.
*Neutral-Red Serum Test for Cancer. A. H. Roffo and Rivarola.—p. 644.

Gelatin in Treatment of Visceral Pains.—Margulis protests against restricting the use of solutions of gelatin merely to increase the coagulability of the blood, as it has a much wider field of usefulness. Wherever there is a visceral lesion that has reached a stationary phase or torpid course, with pain, daily subcutaneous injection of 5 or 10 cc. of a 5 per cent solution of gelatin may relieve the pain and speed up the healing process by rousing the defensive forces. He describes ten cases to show the efficacy of this treatment in angina pectoris, hemoptysis, aortitis and incipient tuberculosis, with or without a little phenol. Patiño Mayer has reported excellent results with gelatin in sixty cases of aneurysm. He used a weekly injection of 100 cc. of a 2 per cent solution.

Stain Test for Cancer.—Roffo and Rivarola tabulate the findings with their neutral-red serologic test in 202 cases. The list includes sixty-five of internal cancer, 113 patients with various diseases not suspected of malignancy, and twenty-one with cancers on skin or mucous membrane. In the sixty-five cancer cases, the test elicited a positive response in all but one instance, that is, in 98.4 per cent. In the group free from cancer, the response was negative in 100 per cent. In the twenty-one cases of superficial cancer, the reaction was positive in only 33 per cent. These findings harmonized with those from other biochemical tests, the superficial cancers having an outlet for their secretions, and the general metabolism is not affected so much as with internal malignancies. The age, the p_H, and the evolution of the process do not seem to affect the outcome. The test is merely the addition of 5 drops of a 0.03 per cent solution of neutral red to 2 cc. of the limpid serum. With normal serum the tint of the fluid is yellowish; with cancer serum the tint changes rapidly to a more or less reddish color. The colorimeter gage used is a solution of phenolphthalein. The slightest tendency to hemolysis in the blood nullifies the test.

Revista de la Asoc. Médica Argentina, Buenos Aires

38: 371-444 (Oct.) 1925

*Pneumonia in Children. J. C. Navarro and J. C. Bertrand.—p. 371.
Primary Grave Recurring Anemia in Tuberculosis. P. Escudero and F. Puchulu.—p. 385.
Insanity from Surgical Standpoint. E. Albina.—p. 395.
Recurring Dislocation of the Shoulder. F. Z. Guerini.—p. 403.
*The Hemoclastic Wassermann Test. P. Lenci.—p. 415.
Hemoptysis in Hypertension. R. Rossi.—p. 424.
*The Trichina in Argentina. S. Odriozola.—p. 433.

Pneumonia in Children.—Navarro and Bertrand remark that the gravity of pneumonia in Argentina seems to depend on the geographical location. In the lowland it is mild, while in the mountainous regions the death rate of apparently the same process is high. In the thirty-five cases described all but ten were boys.

Bancieu's Modification of the Wassermann Test.—Bancieu lets the blood coagulate and then breaks up the clot with a glass rod; this allows the hemoglobin to be dissolved in the serum. Lenci's comparative tests with this so-called hemoclastic and the original technic in 249 cases showed that in 15 per cent the Bancieu method was the more sensitive of the two. Lenci found it more convenient to draw the blood into tubes containing three or four beads which defibrinated the blood and prevented coagulation while mechanically destroying the erythrocytes. This answered the same purpose as the clotting and glass rod.

Trichinosis in Argentina.—Odriozola remarks that although trichinosis in man seems to be almost unknown in Argentina, 1,500 hogs were found to be infested with trichina in the slaughter houses of Buenos Aires in 1924. The municipal trichina laboratory protects the public.

Archiv für Gynäkologie, Berlin

127: 1-292 (Dec. 12) 1925

*Examination by the Rectum in Prevention of Fever. T. Koller.—p. 1.
Prognosis of Amenorrhea. R. Hofstätter.—p. 39.
Management of Third Stage of Labor. A. Haba.—p. 80.
Ovary and Cerebrospinal Fluid. E. Vogt.—p. 97.
*Calcium Content of the Placenta. E. Wehefritz.—p. 106.
*Colpitis Ventularum. Flatau and Herzog.—p. 113.
Sarcoma of Female Sex Organs. F. Gál.—p. 122.
*Infection Path in Pyelitis. L. Luchs.—p. 149.
*Edema in Pregnancy. G. Kaboth.—p. 170.
Hypernephroid Sarcoma in Pelvis. Schiffmann and Szamek.—p. 194.
Adenoma of the Umbilicus. J. Schiffmann and W. Seyfert.—p. 208.
Invasion of Adenomyomatous Uterus by Ovarian Cancer. Steiner. —p. 226.
*Repeated Cesarean Section. Koloman von Lehoczky-Semmelweis.—p. 237.
*Ovarian Function and Hormone. B. Zondek and S. Aschheim.—p. 250.

Examination by the Rectum in Prevention of Fever.—Koller found no difference in the frequency of fever or the mortality in the women who had been examined during labor exclusively by the vagina or by the rectum. Yet the frequency of peri-uterine puerperal wound infections was 0.32 per cent with vaginal examination against 0.05 per cent with rectal examination, each group including 4,017 women.

Calcium Content of the Placenta.—Wehefritz determined the calcium content of the placenta from different months of pregnancy. It was especially high up to the seventh month. The maximum was 1.1 per cent of the dry substance. It

decreased later, together with a decrease in dry substance and changes of the proteins of the placenta.

So-Called Colpitis Vetularum.—Flatau and Herzog draw a close parallel between senile eczema of the skin and the atrophic changes of the vagina occurring in the menopause. No signs of inflammation were found. Dry treatment with pastes is best. Ovarian grafts might be considered.

Infection Path in Pyelitis.—Luchs examined the ureters in fifty pregnant women. Only nine of them had a perfect function of the ureters. The ureter was dilated in forty-one cases (nineteen on the right side alone, and the rest usually more pronounced on the right side). He accepts the probability of ascending infection in pregnancy pyelitis. Catheterization of the ureters is valuable for its prevention.

Edema in Pregnancy.—Kaboth found a decreased albumin-globulin ratio (0.81 instead of 1.5-2) in the serum from pregnant women with edema. The specific osmotic pressure of the serum colloids is lowered parallel to these changes. This lowered hydration energy contributes to the edema. Besides this, he observed changes in the capillaries and venules.

Repeated Cesarean Section.—Lehoczky-Semmelweis concludes that three cesarean sections may be reasonably performed on the same woman. The third is an indication for simultaneous sterilization, if the woman so desires.

Ovarian Function and Hormone.—Zondek and Aschheim used Allen's technic based on Lataste's discovery as the test method. They induced the typical changes in the vagina of mice by injection or implantation of theca cells and follicle fluid of the corpus luteum of menstruation and of pregnancy, but not of the regressive phase of the corpus luteum. Granulosa cells were inactive. The placenta was the only other organ containing the hormone which seems to be identical in different species. Only the experiments with rabbit ovaries were always negative. Neither cholesterol nor lecithin produced the ovarian cycle in castrated mice, although Fellner's lipoid extract was active. Administration by mouth of the tissues containing the hormone gave positive results. They point out, however, that none of the commercial preparations displayed any influence.

Archiv für klinische Chirurgie, Berlin

137: 463-736 (Dec. 22) 1925

Experimental Asthma and Its Treatment. W. Braeucker.—p. 463. C'td.
*Reaction of Pancreas. P. Walzel.—p. 512.
Chronic Thyroiditis. G. Hahn.—p. 549.
Infusion and Transfusion in Abdominal Surgery. Friedemann.—p. 555.
Jejunal Ulcer After Resection. E. Birgfeld.—p. 568.
*Experimental Research on Blood Transfusion. L. Rossius.—p. 583.
Osteoporosis and Rickets. C. R. H. Rabl.—p. 619.
*Bone Explants. E. Liek.—p. 635.
*Thoracic Duct and Sympathetic Nerve. S. Minkin.—p. 646.
Calcium Iontophoresis in Surgical Tuberculosis. A. Schanin.—p. 652.
*Radius Dislocation and Other Anomalies in Four Generations. R. Trauner and H. Rieger.—p. 659.
Biologic Diagnosis of Surgical Tuberculosis. H. Friedrich.—p. 667.
Sedimentation Test. W. Stemmler.—p. 705.
Heterotopic Endometrium. J. Bungart.—p. 719.
Gastric Ulcer in Children. M. Weber.—p. 731.

Reaction of Pancreas to an Operation on a Neighboring Organ.—Walzel deals with the acute necrosis or suppuration in the pancreas following surgical intervention on neighboring organs. The radical excision of penetrating ulcers of the stomach or duodenum is an especially frequent cause.

Experimental Research on Blood Transfusion.—Rossius bled rabbits nearly to death and then tested various forms of transfusion. Washed erythrocytes had only about the same influence as a physiologic solution of sodium chloride. She never succeeded with them in resuscitating an animal after paralysis of the respiration. Injection of serum gave as good results as transfusion of the whole blood.

Bone Explants.—Liek resected ribs of rabbits and kept one piece in a moist chamber, filled with oxygen, the other corresponding piece without a supply of oxygen. He transplanted the pieces later into the omentum of the same rabbit. Bone formation occurred with the rib portion that had been kept in the oxygen chamber up to six days. The control rib portions were all dead in one or two days.

Thoracic Duct and Sympathetic Nerve.—Minkin illustrates the topographic relations between the thoracic duct and the stellate ganglion. He says that certain prominent surgeons have injured the duct during sympathectomy.

Radius Dislocation and Other Anomalies in Four Generations.—Trauner and Rieger publish the clinical findings and the family tree of four generations with six cases of congenital dislocation of the radius. Besides this, there were changes in the knee and finger joints and atrophy of the nails. The heredity was dominant.

Deutsche medizinische Wochenschrift, Berlin

51: 2143-2160 (Dec. 25) 1925

Surgery of the Phrenic and Sympathetic Nerves. Colmers.—p. 2143.
*Proctostasis and Constipation. H. Strauss.—p. 2146.
*Bock's Polarization Test for Hormones. E. v. Schubert.—p. 2147.
Weleminsky's Tuberculomucin. K. Henius and E. Basch.—p. 2149.
"Action of Bile Acids." Neubauer.—p. 2150. Reply. Adler.—p. 2150.
*Origin of Syphilitic Blood Changes. H. Hecht and I. Schubert.—p. 2151.
Exanthema Subitum. S. Salomon.—p. 2152.
A Knife for Vaginal Surgery. E. Guttmann.—p. 2152.
Proprietary and Secret Remedies. Zernik.—p. 2152. C'tn.
Social Insurance and Tuberculosis. Blümel.—p. 2153.

Proctostasis and Constipation.—Strauss rates the proctogenous type of constipation at 5-10 per cent of all his cases. The diagnosis is safe, if we find repeatedly scybala in the rectum while the patient feels no desire to empty the bowels. Systematic training of the rectum—eventually by means of a few enemas—cures the simple cases. In the paradoxic proctostasis (diarrhea provoked by the presence of scybala), the hard masses have to be evacuated by hand.

Bock's Polarization Test for Hormones.—Schubert shows that the phenomenon observed by Bock is simply anisotropy—not a polarization. Consequently the angle read on the analyzer depends only on the position in which the droplet happens to be.

Origin of Syphilitic Blood Changes.—Hecht and Schubert induced a positive Hecht reaction in four, a Meinicke turbidity reaction in three, and a weak anticomplementary action in two out of five subjects injected with a mixture of hog serum and extract from human organs.

Klinische Wochenschrift, Berlin

4: 2481-2520 (Dec. 24) 1925

Present Status of the Neurone Theory. B. Klarfeld.—p. 2481.
Nervous Dyspepsia. H. Curschmann.—p. 2483.
*The Parathyroid Hormone. H. Schulten.—p. 2487.
Pharmacology of Glaucoma. L. K. Wolff and S. E. de Jongh.—p. 2489.
Percutaneous Shock Treatment. P. Seeliger and E. Herrmann.—p. 2490.
*Protein Therapy of Ulcer. E. Gohrbandt.—p. 2492.
Treatment of Diabetes. M. Lauritzen.—p. 2494.
Quality Standards for Roentgen Rays. H. Seemann.—p. 2496.
Needle Electrodes for Electrocardiography. A. Weber.—p. 2497.
"Cholesterol Metabolism." P. Huebschmann.—p. 2498.
Muscle Excitability in Epilepsy. R. Hopmann.—p. 2498.
Oligodynamic Action. A. E. Ruete.—p. 2499.
Dilation of Steno's Duct. T. Bársony.—p. 2500.
Acute Poisonings. L. Lichtwitz.—p. 2501.
Open Door Treatment of the Insane. H. Roemer.—p. 2505.
The Meinicke Microtest. W. Hartwich.—p. 2518.

The Parathyroid Hormone.—Schulten confirms Hanson's, Beermann's, Collip's and other research workers' discovery of the possibility of extraction of a parathyroid hormone by hydrochloric acid.

Protein Therapy of Ulcer.—Gohrbandt reports three cases of duodenal ulcer persisting in spite of a clinical cure attributed to protein injections. New ulcers formed in spite of this treatment, as also in three other patients operated on because of duodenal ulcers.

Zeitschrift für Kinderheilkunde, Berlin

40: 309-426 (Dec. 16) 1925

*Caronia's Intracutaneous Tests. A. F. Hecht.—p. 309.
*Protein Therapy in Children. A. F. Tur.—p. 322.
Ferments in Infants' Urine. A. F. Tur.—p. 331.
Enuresis and Dreams. S. Weissenberg.—p. 343.
*Activation of Tuberculosis by Measles? W. Beisken.—p. 353.
*Leukocytes in Gastro-Enteritis. F. Heissen.—p. 360.
Endocarditis in Young Children. R. Geiger.—p. 370.
Immunity in Tuberculosis. N. M. Nikolajew.—p. 401.
Congenital Syphilis. H. Orel.—p. 414.

"Protein Milk Plus Thickening." K. Ochsenius.—p. 422.
Reply. H. Pogorschelsky.—p. 424.
"Beef Serum in Measles." J. Smoira.—p. 425.

Caronia's Intracutaneous Tests.—Hecht used filtrates from Caronia's alleged scarlet fever and measles cultures for intradermal tests. The former were sometimes positive even after scarlet fever. The reaction to the alleged measles toxin was the same in children who had had measles as in those who had no history of measles.

Protein Therapy in Children.—Tur had only few good results with parenteral milk injections in children. The hypotrophic patients were benefited. The children with marasmus did not respond.

Activation of Tuberculosis by Measles?—Beisken joins Noeggerath and Eckstein in their skeptical attitude as to the activation of tuberculosis by measles.

Leukocytes in Gastro-Enteritis.—Heissen studied the morphology of the blood in twelve infants with toxicosis and forty with dyspepsia of infectious or alimentary origin. With grave conditions, the shifting to the left was so strong that there were hardly any normally segmented leukocytes. Myelocytes, promyelocytes and even myeloblasts were found in the grave cases, while the eosinophils were absent and monocytes practically absent. When the alimentary intoxication was only the final stage of a long illness, the percentage of lymphocytes was normal. In acute conditions, the neutrophils prevailed. The cytoplasm and granules were degenerated. The absolute counts were high (up to 34,000-40,000) unless the child had been weak before.

Zeitschrift für klinische Medizin, Berlin

102: 343-648 (Dec. 22) 1925

*Intravenous Injection of Glucose. E. Meyer.—p. 343.
*Spasm-Reducing Action of Glucose. H. Handovsky.—p. 347.
*Blood Pressure and Leukopenia After Glucose Injection. P. Wichels. —p. 352.
*The Capillaries After Glucose Injections. A. J. Weil.—p. 357.
*Histohemorenal Distribution of Lactose. E. Bernheim and C. R. Schlayer.—p. 369.
*Determination of Lactose in the Blood. A. Kowarski.—p. 382.
Pigmentation and Endocrine Dystrophy. Leschke and Ullmann.—p. 388.
*Goiter and Pulmonary Tuberculosis. A. Hittmair.—p. 412.
*Epinephrine Test in Diagnosis. A. Hittmair.—p. 420.
Action Hypertrophy of Muscle. H. Petow and W. Siebert.—p. 427.
Growth Promoting Substance in Tetanized Muscle. W. Siebert and H. Petow.—p. 434.
*The Thyroid and Gastric Secretion. S. G. Lewit.—p. 440.
*The Erythrocytes After Splenectomy. G. Roese.—p. 454.
Physiologic Leukocytosis in Man. A. Kobryner.—p. 470.
*Antigen Character of Own Erythrocytes. P. Wichels.—p. 484.
Muscular Backache. A. Müller.—p. 537.
Hypertrophy of the Heart and the Electrocardiogram. Burger.—p. 603.

Intravenous Injection of Glucose.—Meyer used intravenous injections of 10-20 cc. of a 10-20 per cent solution of glucose in several hundred patients. It enhances the action of simultaneously injected digitalis and strophanthin and prevents the angina pectoris which occurs occasionally otherwise after injections of strophanthin. He had excellent results in angina pectoris when injecting the glucose daily or every other day, eventually in combination with a theophyllin preparation. He had no reason to recommend a surgical intervention in any such case with hypertrophy of the heart and high blood pressure. The blood pressure became permanently lower in many patients. True angina pectoris without hypertension and without enlargement of the heart has a much graver prognosis. Intermittent claudication was well influenced. He recommends the treatment even in diabetics with angina pectoris.

Spasm Reducing Action of Glucose.—Handovsky saw no difference between the speed of the circulation in the rabbit heart perfused with Ringer's solution or with further addition of 2 per cent glucose. Serum used for perfusion caused a vasoconstriction even when diluted (sometimes up to 1:16). A solution of 1:250 or 1:500 of glucose inhibited the vasoconstrictor effect of certain serums. He found that this occurred only with those samples of serum which showed an increased amount of easily extracted cholesterol after addition of crystalloids. The same phenomenon could be induced by injections of glucose in the patients from whom the serum had been taken. The total amount of serum cholesterol was not high in these hypertension patients, but its lability in vivo as well as in vitro proved to be great. Westphal found this lability also in diabetes. Contrary to this, the lability of cholesterol is decreased in nephrosis, in infections, and toward the end of pregnancy.

Blood Pressure and Blood Counts After Glucose Injections.—Wichels confirms the lowering of the high blood pressure in twenty-one of twenty-six cases of genuine hypertension after intravenous injections of small amounts of glucose. The action of levulose and especially of sodium chloride was less pronounced. At the same time he observed a decrease of about 3,000 leukocytes per cubic millimeter. The absolute lymphocyte count did not change except with previous lymphocytosis. Atropine prevented this reaction. He also confirmed the decreased tonus of surviving strips of intestine from guinea-pigs, cats and dogs, after addition of 0.1 per cent glucose, if their tonus had been increased by addition of serum to the fluid in which they were suspended. The glucose had no influence on strips which were not under the action of the serum. He concludes that the glucose acts by changing the colloidal condition of the serum.

Capillaries After Glucose Injections.—Weil observed the capillaries after intravenous injections of small amounts of glucose. He found in hypertension patients a widening of the previously narrow lumen and better circulation, which was parallel with the lowered blood pressure. No changes were observed in the majority of nephritis patients.

Distribution of Lactose in Tissues, Blood and Kidneys.—Bernheim and Schlayer found in healthy subjects an almost complete parallelism in the excretion of lactose and of phenolsulphonphthalein when comparing their blood concentration and elimination. The latter appears to be almost independent of the former, and resembles more the curve of retention in the tissues. Differences between the two substances were observed in nephritis and in polyuria and oliguria. The latter two conditions do not influence the phenolsulphonphthalein test. Polyuria accelerates the decrease of concentration of lactose in the blood, without modifying its elimination much. Oliguria does not influence the lactose content of the blood, but prolongs its excretion. Novasurol impairs the excretion—just as it does with phenolsulphonphthalein—without changing the blood curve.

Determination of Lactose in the Blood.—Kowarski has devised a method based on the fact that the reduction power of lactose is about 30 per cent less than that of glucose. When it is inverted, by boiling with acids, into glucose and galactose, the reduction equals that of glucose. The difference of the reducing power of the two samples of protein-free blood filtrate indicates the amount of milk sugar.

Goiter and Pulmonary Tuberculosis.—Hittmair demonstrates by statistics of 500 subjects that parenchymatous goiter almost never occurs with exudative pulmonary tuberculosis. The latter was found comparatively frequently in patients with a hard or cystic goiter. A parenchymatous goiter gets smaller and harder, if the pulmonary tuberculosis becomes progressive.

Epinephrine Test in Diagnosis.—Hittmair concludes from his observations on some cases before, during, or long after splenectomy, that the changes in the number of leukocytes after test injections of epinephrine are only misleading in diagnosis of diseases of the spleen.

The Thyroid and Gastric Secretion.—Lewit noted an increased gastric secretion after administration of thyroid. Patients with hyperthyroidism have as a rule hyperacidity and hypersecretion. Hypacidity or achylia is frequent in exophthalmic goiter. It may be functional or due to atrophy of the mucous membrane of the stomach.

The Erythrocytes After Splenectomy.—Roese has found for such studies the dog a more suitable animal than the rabbit. Splenectomy increased here distinctly the hemopoietic function, as evidenced by an increased amount of erythrocytes and hemoglobin, and the presence of younger forms of ery-

throcytes in the blood. Injection of a spleen extract caused in such an animal a transitory decrease in the erythrocytes and especially a decrease of their oxygen consumption, which became practically normal for a day.

Antigen Character of Own Erythrocytes.—Wichels observed in a case of paroxysmal hemoglobinuria an increase in the titer of the cold hemolysins, autohemagglutinins and accelerated sedimentation speed after the attacks and a decrease in the intervals. He believes that the destruction of erythrocytes in the attack contributes by a circulus vitiosus to the prolongation of the sickness. Injection of own erythrocytes in patients with infectious diseases accelerated the sedimentation of the blood corpuscles. The results were negative with healthy subjects. He concludes from this that the acceleration of sedimentation is a reaction to the destruction of the own erythrocytes, which may act under certain conditions as an antigen in the patient's own body.

Zentralblatt für Chirurgie, Leipzig

52: 2929-3080 (Dec. 31) 1925

"Treatment of Arthritis Deformans." G. Hoffmann.—p. 2929.
Reply. E. Payr.—p. 2930.
"Surgery of Hallux Valgus." G. Hoffmann.—p. 2930.
Reply. E. Payr.—p. 2930.
"Healing by Primary Intention." W. Block.—p. 2932.

Zentralblatt für Gynäkologie, Leipzig

49: 2929-2992 (Dec. 31) 1925

"Treatment of Bleeding Laceration of the Cervix After Spontaneous Delivery." T. Johannsen.—p. 2929.

Časopis lékařů českých, Prague

64: 1825-1860 (Dec. 19) 1925

Obituary of J. Znojemský. Horák.—p. 1826.
Hemiatrophy of Tongue. J. Pelnář.—p. 1827.
Blood Oxygen in Surgery. V. Brezovnik.—p. 1828.
Periarterial Sympathectomy. C. Pokorný.—p. 1831.
Juvenile General Paresis in Congenital Syphilis. M. Springlová.—p. 1833. C'cn., p. 1880.
*Insulin and Muscular Fatigue. F. Karásek.—p. 1840.
Insulin and Automatic Movements. F. Karásek.—p. 1844.
*Marantic Infants and Hysteresis. K. Švehla and C. Saitz.—p. 1847. C'cn.

Insulin and Muscular Fatigue.—Karásek added 0.1 mg. of insulin to 20 cc. of sea water in which he studied the movements of the tentacles of sea anemones. Their contractility increased for a short time and decreased afterward for an hour. Addition of glucose had the opposite effect, which was enhanced by the simultaneous use of both insulin and glucose.

Infants with Marasmus and Hysteresis.—Švehla and Saitz publish a detailed study on the changes of colloidal stability of the serum (hysteresis of protoplasma) in infants, with especial regard to atrophic conditions and syphilis. They compared Růžička's technic with the flocculation reaction in syphilis.

64: 1861-1896 (Dec. 26) 1925

Exogenous Reaction in Epidemic Encephalitis. F. Kafka.—p. 1861.
*Status Epilepticus in Cerebral Syphilis. J. Stuchlík.—p. 1863.
Malaria Treatment of General Paresis. A. Bálint.—p. 1869.
Congenital Anomalies in the New-Born. J. Šimeček.—p. 1874.
*Membrane Potential. S. Janoušek and A. Andres.—p. 1877.

Status Epilepticus in Cerebral Syphilis.—Stuchlík observed a status epilepticus in a pregnant woman suffering from syphilis of the brain.

Membrane Potential.—Janoušek and Andres determined the hydrogen ion concentration and some of the electrolytes in the blood plasma and exudates in certain patients. The hydrogen ion concentration indicated the presence of Donnan's equilibrium when the exudate contained only a little albumin. The distribution of calcium, potassium and chlorine gave only slight indications of such equilibrium. Sodium was irregular, and phosphates were always lower in the serous fluids.

Nederlandsch Tijdschrift v. Geneeskunde, Amsterdam

2: 2523-2650 (Dec. 5) 1925

*The Bactericidal Property of Blood. L. K. Wolff.—p. 2528.
Experiences with Abortions. J. A. van Dongen.—p. 2540. C'cn.
*Scarlatinal Eruption After Chickenpox and Burns. Herderschée.—p. 2548.
Plato on Psychic Disturbances. H. J. L. Lulofs.—p. 2552.
Alardus Auletius, 1545-1606. J. W. Napjus.—p. 2559.
Work in Treatment of Tuberculosis. J. G. A. Honig.—p. 2608.

The Bactericidal Potency of the Blood.—Wolff found no bactericidal property in rabbit blood while it was pronounced in normal human blood and even in furunculosis and other staphylococcus affections.

Scarlatinal Eruption After Chickenpox and Burns.—Herderschée presents evidence which suggests the possibility of another specific factor in scarlet fever, besides the hemolytic streptococcus. It may be a filtrable virus that sensitizes the body for the streptococcus toxins. In any event, he thinks the relations between true scarlet fever, chickenpox and the lesions in burns will well repay closer study. In the last year he has observed thirty cases in which an eruption closely resembling that of scarlet fever developed a day or two after the appearance of the crop of vesicles in varicella.

2: 2763-2854 (Dec. 19) 1925

Dangers of Proposed Centralization of the Health Insurance System. P. Muntendam.—p. 2764.
Experimental Pseudocysts with Mucous Content (Rabbit). Finaly.—p. 2768.
*Vaccination Encephalitis. G. Brouwer.—p. 2773.
Comparative Study of Different Brands of Insulin. Sybrandy.—p. 2776.
Lipoma in Pia at Base of Brain. A. P. Timmer.—p. 2782.
*Pernicious Anemia in Roentgenologist. J. Lankhout.—p. 2789.

Vaccination Epidemic Encephalitis.—In a small town of 5,000 inhabitants, in the course of a recent month, a number of the children between 5 and 9 years old developed influenza and four developed epidemic encephalitis, fatal in one instance. Forty of the children had been vaccinated just before, and two of the encephalitis cases were in the vaccinated group. Brouwer adds that in the last three months he has encountered a large number of cases of infectious sore throat, and in eight instances there was acute, sometimes hemorrhagic nephritis. He never saw as many cases of the kind in all his years of practice as in this last quarter. What he calls "infectious sore throat" probably, he says, may be a form of influenza. In these cases it displayed an affinity for the kidney; when it displays an affinity for the brain, we have epidemic encephalitis. It might be well to ascertain whether influenza is prevalent among the children in the locality when vaccination is followed by encephalitis.

Aplastic Pernicious Anemia from Professional Use of the Roentgen Rays.—The man was director of a roentgen-ray laboratory, and had been careless about protecting himself. The blood was of the pernicious anemia type, the color index 1.3 a few days before death.

Hospitalstidende, Copenhagen

68: 1033-1048 (Nov. 19) 1925

Cerebral Hemorrhage in Eclampsia. S. A. Gammeltoft.—p. 1033.
*The Glycosuria Threshold in the Pregnant. K. Faber.—p. 1039.

68: 1049-1068 (Nov. 26) 1925

Charcot: The Man and His Work. V. Christiansen.—p. 1049.

The Glycosuria Threshold in Diabetes and Pregnancy.—Faber's latest research has confirmed his previous assertions as to the glycosuria threshold being an individual property which keeps constant in the individual, normal or diabetic, except under conditions of special stress, while the threshold may vary widely in different persons. Pregnancy is a period of special stress, and his record of the sugar content of the blood and of the urine in two pregnant women shows that the threshold is much lower than usual at this time. His tables show the findings every five minutes for an hour and a half after ingestion of 25 Gm. of sugar a week before delivery. The blood sugar was 54 in the first woman. When the blood sugar reached its maximum of 132, sugar appeared in the urine, and the glycosuria persisted until the blood sugar had dropped to 52. With test ingestion of 15 Gm. of glucose, there was no appreciable glycosuria. A week after delivery the blood sugar rose to 156 after ingestion of 25 Gm. of glucose but glycosuria did not appear until twenty-five minutes later. Six months later, the blood sugar rose from 94 to 197 after intake of 100 Gm. of glucose but no sugar appeared in the urine. He comments on the remarkably low sugar level in the blood during the pregnancy and the correction of this hypoglycemia during the following half year.